

# Cited in Search Notes

| L Number | Hits    | Search Text  | DB              | Time stamp       |
|----------|---------|--|-----------------|------------------|
| 1        | 6408    | 430/944,945,281.1,286.1,287.1.ccls. 101/463.1,456,457.ccls.  | USPAT; US-PGPUB | 2004/02/12 15:40 |
| 2        | 97      | (430/944,945,281.1,286.1,287.1.ccls. 101/463.1,456,457.ccls.) and @pd>20031201   | USPAT; US-PGPUB | 2004/02/12 15:41 |
| 3        | 894     | 430/284.1,285.1.ccls.  | USPAT; US-PGPUB | 2004/02/12 15:43 |
| 4        | 355     | 430/284.1,285.1.ccls. not (430/944,945,281.1,286.1,287.1.ccls. 101/463.1,456,457.ccls.)  | USPAT; US-PGPUB | 2004/02/12 15:42 |
| 5        | 1270    | 430/284.1,285.1.,273.1.ccls.   | USPAT; US-PGPUB | 2004/02/12 15:43 |
| 6        | 2742    | 430/284.1,285.1.,273.1,911,910,916,920,922,914,925,926.ccls.   | USPAT; US-PGPUB | 2004/02/12 15:45 |
| 7        | 1466    | 430/284.1,285.1.,273.1,911,910,916,920,922,914,925,926.ccls. not (430/944,945,281.1,286.1,287.1.ccls. 101/463.1,456,457.ccls.)   | USPAT; US-PGPUB | 2004/02/12 15:45 |
| 8        | 408     | (430/284.1,285.1.,273.1,911,910,916,920,922,914,925,926.ccls. not (430/944,945,281.1,286.1,287.1.ccls. 101/463.1,456,457.ccls.)) and (lithogr\$ planogr\$ offset) and printing | USPAT; US-PGPUB | 2004/02/12 15:51 |
| 9        | 2       | ("5888700") or ("5776655").PN.   | USPAT; US-PGPUB | 2004/02/12 16:11 |
| -        | 589     | 430/944.ccls.  | USPAT; US-PGPUB | 2003/04/30 17:22 |
| -        | 309     | 430/944.ccls. and (430/269-309.ccls.)  | USPAT; US-PGPUB | 2003/04/30 17:37 |
| -        | 1       | 6309792.pn.  | USPAT; US-PGPUB | 2003/04/30 17:38 |
| -        | 2       | ("6309792").PN.  | USPAT; US-PGPUB | 2003/04/30 17:57 |
| -        | 1       | 2000-571946.NRAN.  | DERWENT         | 2003/04/30 17:57 |
| -        | 1       | ("20020155375").PN.  | DERWENT         | 2003/05/01 11:04 |
| -        | 1752    | (430/302).CCLS.  | USPAT; US-PGPUB | 2003/05/01 13:11 |
| -        | 2564    | (430/281.1,287.1,286.1,273.1.).CCLS.   | USPAT; US-PGPUB | 2003/05/01 13:12 |
| -        | 193     | ((430/302).CCLS.) and ((430/281.1,287.1,286.1,273.1.).CCLS.)   | USPAT; US-PGPUB | 2003/05/01 14:05 |
| -        | 3839    | cellulose adj acetate adj phthalate and (acid number)  | USPAT; US-PGPUB | 2003/05/01 14:05 |
| -        | 55      | cellulose adj acetate adj phthalate and (acid adj number)  | USPAT; US-PGPUB | 2003/05/01 14:07 |
| -        | 12      | cellulose adj acetate adj phthalate same (acid adj number)   | USPAT; US-PGPUB | 2003/05/01 14:26 |
| -        | 1       | ("5756261").PN.  | USPAT; US-PGPUB | 2003/05/01 14:24 |
| -        | 9       | cellulose adj acetate adj phthalate same (acid adj value)  | USPAT; US-PGPUB | 2003/05/01 14:27 |
| -        | 25485   | (acid saponification) adj (number value)   | USPAT; US-PGPUB | 2003/05/01 14:28 |
| -        | 18640   | (planograph? lithograph? offset) same (printing)   | USPAT; US-PGPUB | 2003/05/01 14:34 |
| -        | 1725840 | s ((acid saponification) adj (number value)) and ((planograph? lithograph? offset) same (printing))  | USPAT; US-PGPUB | 2003/05/01 14:29 |
| -        | 1000    | ((acid saponification) adj (number value)) and ((planograph? lithograph? offset) same (printing))  | USPAT; US-PGPUB | 2003/05/01 14:29 |
| -        | 108349  | 430/\$.ccls. or 101/\$.ccls.   | USPAT; US-PGPUB | 2003/05/01 14:30 |
| -        | 589     | ((acid saponification) adj (number value)) and ((planograph? lithograph? offset) same (printing)) and (430/\$.ccls. or 101/\$.ccls.)   | USPAT; US-PGPUB | 2003/05/01 14:30 |
| -        | 251352  | ir or i adj r or infrared or infra adj red   | USPAT; US-PGPUB | 2003/05/01 14:31 |

## EAST DATA Base Search History

Search History 2/12/04 4:11:40 PM Page 1  
 C:\APPS\east\workspaces\10040241.wsp

02/12/04

CYNTHIA HAMILTON  
 PRIMARY EXAMINER

Leave in File

Cynthia Hamilton

|  |       |   |                   |                  |
|--|-------|---|-------------------|------------------|
|  | 217   | (( ((acid saponification) adj (number value)) and ((planograph? lithograph? offset) same (printing))) and (430/\$.ccls. or 101/\$.ccls.) and (ir or i adj r or infrared or infra adj red)<br>((( ((acid saponification) adj (number value)) and ((planograph? lithograph? offset) same (printing))) and (430/\$.ccls. or 101/\$.ccls.) and (ir or i adj r or infrared or infra adj red)) and 430/281.1-288.1.cccls. | USPAT; US-PGPUB   | 2003/05/01 14:31 |
|  | 74    | ((( ((acid saponification) adj (number value)) and ((planograph? lithograph? offset) same (printing))) and (430/\$.ccls. or 101/\$.ccls.) and (ir or i adj r or infrared or infra adj red)) and 430/281.1-288.1.cccls.  | USPAT; US-PGPUB   | 2003/05/01 14:32 |
|  | 1672  | ((planograph? lithograph? offset) same (printing)) and (430/\$.ccls. or 101/\$.ccls.) and (ir or i adj r or infrared or infra adj red)  | USPAT; US-PGPUB   | 2003/05/01 14:34 |
|  | 22929 | polymethylmethacrylate or poly adj methylmethacrylate or poly adj methyl and methacrylate   | USPAT; US-PGPUB   | 2003/05/01 14:35 |
|  | 174   | (((planograph? lithograph? offset) same (printing)) and (430/\$.ccls. or 101/\$.ccls.) and (ir or i adj r or infrared or infra adj red)) and (polymethylmethacrylate or poly adj methylmethacrylate or poly adj methyl and methacrylate)  | USPAT; US-PGPUB   | 2003/05/01 14:38 |
|  | 30    | (((planograph? lithograph? offset) same (printing)) and (430/\$.ccls. or 101/\$.ccls.) and (ir or i adj r or infrared or infra adj red)) and (polymethylmethacrylate or poly adj methylmethacrylate or poly adj methyl and methacrylate) and (430/281.1-288.1.cccls.)   | USPAT; US-PGPUB   | 2003/05/01 14:38 |
|  | 1     | ("5629354").PN.   | USPAT; US-PGPUB   | 2003/05/01 15:22 |
|  | 1     | ("5776655").PN.   | USPAT; US-PGPUB   | 2003/05/01 15:22 |
|  | 1     | ("5759742").PN.   | USPAT; US-PGPUB   | 2003/05/01 15:23 |
|  | 1     | ("5888700").PN.   | USPAT; US-PGPUB   | 2003/05/01 15:23 |
|  | 1     | de-19906823-\$ did.   | EPO; JPO; DERWENT | 2003/05/01 15:26 |
|  | 1     | 2000-571946.NRAN.   | DERWENT           | 2003/05/01 15:27 |
|  | 2     | jp-2001159819-\$ did.   | EPO; JPO; DERWENT | 2003/10/30 15:08 |

*Cited in  
Search Notes*

Welcome to STN International! Enter x:x

LOGINID:sssptau156cxh

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

*Printed  
out  
02-12-2004*

*STN Database  
Transcript  
for SN 10-040,241  
Performed by  
Exmer Cynthia  
Hamilton*

\* \* \* \* \* \* \* \* \* \* Welcome to STN International \* \* \* \* \* \* \* \* \* \*

NEWS 1 Web Page URLs for STN Seminar Schedule - N. America  
NEWS 2 Apr 08 "Ask CAS" for self-help around the clock  
NEWS 3 Jun 03 New e-mail delivery for search results now available  
NEWS 4 Aug 08 PHARMAMarketLetter(PHARMAML) - new on STN  
NEWS 5 Aug 19 Aquatic Toxicity Information Retrieval (AQUIRE)  
now available on STN  
NEWS 6 Aug 26 Sequence searching in REGISTRY enhanced  
NEWS 7 Sep 03 JAPIO has been reloaded and enhanced  
NEWS 8 Sep 16 Experimental properties added to the REGISTRY file  
NEWS 9 Sep 16 CA Section Thesaurus available in CAPLUS and CA  
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NEWS 11 Oct 24 BEILSTEIN adds new search fields  
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NEWS 13 Nov 18 DKILIT has been renamed APOLLIT  
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NEWS 16 Dec 17 PCTFULL now covers WP/PCT Applications from 1978 to date  
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NEWS 18 Dec 17 Adis Clinical Trials Insight now available on STN  
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ENERGY, INSPEC  
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NEWS 21 Feb 24 METADEX enhancements  
NEWS 22 Feb 24 PCTGEN now available on STN  
NEWS 23 Feb 24 TEMA now available on STN  
NEWS 24 Feb 26 NTIS now allows simultaneous left and right truncation  
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NEWS 26 Mar 04 SDI PACKAGE for monthly delivery of multifile SDI results  
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NEWS 28 Mar 20 EVENTLINE will be removed from STN  
NEWS 29 Mar 24 PATDPAFULL now available on STN  
NEWS 30 Mar 24 Additional information for trade-named substances without  
structures available in REGISTRY  
NEWS 31 Apr 11 Display formats in DGENE enhanced  
NEWS 32 Apr 14 MEDLINE Reload  
NEWS 33 Apr 17 Polymer searching in REGISTRY enhanced  
NEWS 34 Apr 21 Indexing from 1947 to 1956 being added to records in CA/CAPLUS  
NEWS 35 Apr 21 New current-awareness alert (SDI) frequency in  
WPIDS/WINDEX/WPIX  
NEWS 36 Apr 28 RDISCLOSURE now available on STN  
  
NEWS EXPRESS April 4 CURRENT WINDOWS VERSION IS V6.01a, CURRENT  
MACINTOSH VERSION IS V6.0b(ENG) AND V6.0b(JP),  
AND CURRENT DISCOVER FILE IS DATED 01 APRIL 2003  
  
NEWS HOURS STN Operating Hours Plus Help Desk Availability  
NEWS INTER General Internet Information  
NEWS LOGIN Welcome Banner and News Items  
NEWS PHONE Direct Dial and Telecommunication Network Access to STN  
NEWS WWW CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that specific topic.

*Dates  
4-30-2003  
5-01-2003*

*CYNTHIA HAMILTON  
PRIMARY EXAMINER*

*DO NOT REMOVE FROM  
PRIMARY EXAMINER*

*Exmer C. Hamilton  
4-30-03*

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\* STN Columbus \*

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FILE 'REGISTRY' ENTERED AT 15:26:56 ON 30 APR 2003  
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STRUCTURE FILE UPDATES: 29 APR 2003 HIGHEST RN 507441-92-1  
DICTIONARY FILE UPDATES: 29 APR 2003 HIGHEST RN 507441-92-1

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2003

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:  
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

```

=> s n n 1 3 pneylenebisglycine
    4635400 N
    4635400 N
    13332498 1
    11930798 3
          0 PNEYLENEBISGLYCINE
L1      0 N N 1 3 PNEYLENEBISGLYCINE
          (N(W)N(W)1(W)3(W)PNEYLENEBISGLYCINE)

```

```

=> s n n 1 3 phenylenebisglycine
      4635400 N
      4635400 N
      13332498 1
      11930798 3
          0 PHENYLENEBISGLYCINE
L2      0 N N 1 3 PHENYLENEBISGLYCINE
          (N(W)N(W)1(W)3(W)PHENYLENEBISGLYCINE)

```

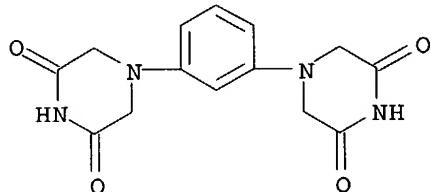
=> s phenylene and glycine  
286122 PHENYLENE  
414547 GLYCINE  
L3 1623 PHENYLENE AND GLYCINE

=> s 13 and n  
 4635400 N  
 L4 1534 L3 AND N

=> s 14 and 1 and 3  
 13332498 1  
 11930798 3  
 L5 870 L4 AND 1 AND 3

=> d 870

L5 ANSWER 870 OF 870 REGISTRY COPYRIGHT 2003 ACS  
 RN 1160-84-5 REGISTRY  
 CN 2,6-Piperazinedione, 4,4'-(1,3-phenylene)bis- (9CI) (CA INDEX  
 NAME)  
 OTHER CA INDEX NAMES:  
 CN 2,6-Piperazinedione, 4,4'-m-phenylenedi- (7CI, 8CI)  
 OTHER NAMES:  
 CN Acetic acid, (m-phenylenedinitrilo)tetra-, N,N:N',N'-diimide  
 CN Glycine, N,N'-(1,3-phenylene)bis[N-(carboxymethyl)-,  
 N,N:N',N'-diimide  
 FS 3D CONCORD  
 MF C14 H14 N4 O4  
 LC STN Files: CA, CAOLD, CAPLUS



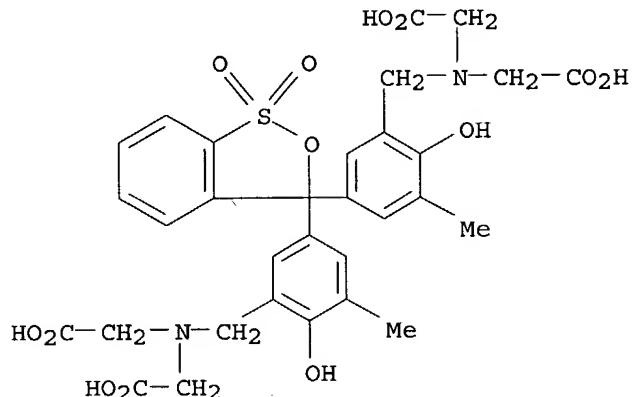
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)  
 1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> d 869

L5 ANSWER 869 OF 870 REGISTRY COPYRIGHT 2003 ACS  
 RN 1611-35-4 REGISTRY  
 CN Glycine, N,N'-[{1,1-dioxido-3H-2,1-benzoxathiol-3-ylidene}bis[(6-hydroxy-5-methyl-3,1-phenylene)methylene]]bis[N-(carboxymethyl)- (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN 3H-2,1-Benzoxathiole, glycine deriv.  
 CN Acetic acid, [(alpha.-hydroxy-o-sulfobenzylidene)bis[(6-hydroxy-5-methyl-m-phenylene)methylenenitrilo]]tetra-, .gamma.-sultone (7CI)  
 CN Acetic acid, [3H-2,1-benzoxathiol-3-ylidene]bis[(6-hydroxy-5-methyl-m-phenylene)methylenenitrilo]]tetra-, S,S-dioxide (8CI)  
 CN Glycine, N,N'-[3H-2,1-benzoxathiol-3-ylidene]bis[(6-hydroxy-5-methyl-3,1-phenylene)methylene]]bis[N-(carboxymethyl)-, S,S-dioxide  
 CN Phenolsulfonephthalein, 3',3''-bis[[bis(carboxymethyl)amino]methyl]-5',5''-dimethyl- (6CI)  
 OTHER NAMES:  
 CN Cresol Phthalexon S  
 CN m-Cresolphthalexon S  
 CN NSC 324982  
 CN o-Cresolphthalexon S

CN Xylenol Orange  
 FS 3D CONCORD  
 DR 6905-79-9, 59764-31-7  
 MF C31 H32 N2 O13 S  
 CI COM  
 LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS,  
     BIOTECHNO, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CIN, CSCHEM,  
     EMBASE, IFICDB, IFIPAT, IFIUDB, MEDLINE, NIOSHTIC, PROMT, TOXCENTER,  
     USPATFULL  
     (\*File contains numerically searchable property data)  
 Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*  
     (\*\*Enter CHEMLIST File for up-to-date regulatory information)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1023 REFERENCES IN FILE CA (1957 TO DATE)  
 214 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 1023 REFERENCES IN FILE CAPLUS (1957 TO DATE)  
 5 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> d his

(FILE 'HOME' ENTERED AT 15:26:51 ON 30 APR 2003)

FILE 'REGISTRY' ENTERED AT 15:26:56 ON 30 APR 2003

L1 0 S N N 1 3 PNEYLENEBISGLYCINE  
 L2 0 S N N 1 3 PHENYLENEBISGLYCINE  
 L3 1623 S PHENYLENE AND GLYCINE  
 L4 1534 S L3 AND N  
 L5 870 S L4 AND 1 AND 3

=> s acetaminophenylimino and acetic acid

0 ACETAMINDOPHENYLIMINO

645377 ACETIC

5878231 ACID

642742 ACETIC ACID

(ACETIC(W)ACID)

L6 0 ACETAMINDOPHENYLIMINO AND ACETIC ACID

=> s acetaminophenylimino and acetic acid

1 ACETAMINOPHENYLIMINO

645377 ACETIC

5878231 ACID

642742 ACETIC ACID

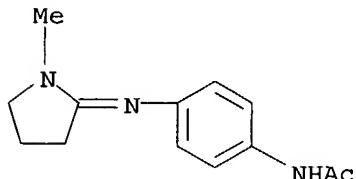
(ACETIC(W)ACID)

L7 0 ACETAMINOPHENYLIMINO AND ACETIC ACID

=> s acetaminophenylimino  
L8 1 ACETAMINOPHENYLIMINO

=> d

L8 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2003 ACS  
RN 36285-43-5 REGISTRY  
CN Acetamide, N-[4-[(1-methyl-2-pyrrolidinylidene)amino]phenyl]- (9CI) (CA INDEX NAME)  
OTHER NAMES:  
CN 2-(4-Acetaminophenylimino)-1-methylpyrrolidine  
MF C13 H17 N3 O  
CI COM  
LC STN Files: BEILSTEIN\*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB  
(\*File contains numerically searchable property data)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

=> s bis and caroxymethyl and amino and benzoic acid  
2659207 BIS  
0 CAROXYMETHYL  
4133775 AMINO  
565969 BENZOIC  
5878231 ACID  
564873 BENZOIC ACID  
(BENZOIC (W) ACID)  
L9 0 BIS AND CAROXYMETHYL AND AMINO AND BENZOIC ACID

=> s bis and carbxymethyl and amino and benzoic acid  
2659207 BIS  
0 CARBXYMETHYL  
4133775 AMINO  
565969 BENZOIC  
5878231 ACID  
564873 BENZOIC ACID  
(BENZOIC (W) ACID)  
L10 0 BIS AND CARBXYMETHYL AND AMINO AND BENZOIC ACID

=> s bis and carboxymethyl and amino and benzoic acid  
2659207 BIS  
53063 CARBOXYMETHYL  
4133775 AMINO  
565969 BENZOIC  
5878231 ACID  
564873 BENZOIC ACID  
(BENZOIC (W) ACID)  
L11 322 BIS AND CARBOXYMETHYL AND AMINO AND BENZOIC ACID

=> d 322



NEWS 4 Aug 08 PHARMAMarketLetter (PHARMAML) - new on STN  
NEWS 5 Aug 19 Aquatic Toxicity Information Retrieval (AQUIRE)  
now available on STN  
NEWS 6 Aug 26 Sequence searching in REGISTRY enhanced  
NEWS 7 Sep 03 JAPIO has been reloaded and enhanced  
NEWS 8 Sep 16 Experimental properties added to the REGISTRY file  
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NEWS 18 Dec 17 Adis Clinical Trials Insight now available on STN  
NEWS 19 Jan 29 Simultaneous left and right truncation added to COMPENDEX,  
ENERGY, INSPEC  
NEWS 20 Feb 13 CANCERLIT is no longer being updated  
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NEWS 22 Feb 24 PCTGEN now available on STN  
NEWS 23 Feb 24 TEMA now available on STN  
NEWS 24 Feb 26 NTIS now allows simultaneous left and right truncation  
NEWS 25 Feb 26 PCTFULL now contains images  
NEWS 26 Mar 04 SDI PACKAGE for monthly delivery of multifile SDI results  
NEWS 27 Mar 19 APOLLIT offering free connect time in April 2003  
NEWS 28 Mar 20 EVENTLINE will be removed from STN  
NEWS 29 Mar 24 PATDPAFULL now available on STN  
NEWS 30 Mar 24 Additional information for trade-named substances without  
structures available in REGISTRY  
NEWS 31 Apr 11 Display formats in DGENE enhanced  
NEWS 32 Apr 14 MEDLINE Reload  
NEWS 33 Apr 17 Polymer searching in REGISTRY enhanced  
NEWS 34 Apr 21 Indexing from 1947 to 1956 being added to records in CA/CAPLUS  
NEWS 35 Apr 21 New current-awareness alert (SDI) frequency in  
WPIDS/WPINDEX/WPIX  
NEWS 36 Apr 28 RDISCLOSURE now available on STN  
  
NEWS EXPRESS April 4 CURRENT WINDOWS VERSION IS V6.01a, CURRENT  
MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP),  
AND CURRENT DISCOVER FILE IS DATED 01 APRIL 2003  
  
NEWS HOURS STN Operating Hours Plus Help Desk Availability  
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NEWS LOGIN Welcome Banner and News Items  
NEWS PHONE Direct Dial and Telecommunication Network Access to STN  
NEWS WWW CAS World Wide Web Site (general information)

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FILE 'HOME' ENTERED AT 16:12:39 ON 30 APR 2003

=> file registry  
COST IN U.S. DOLLARS

SINCE FILE TOTAL

FULL ESTIMATED COST

ENTRY      SESSION  
0.21      0.21

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STRUCTURE FILE UPDATES: 29 APR 2003 HIGHEST RN 507441-92-1  
DICTIONARY FILE UPDATES: 29 APR 2003 HIGHEST RN 507441-92-1

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2003

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conducting SmartSELECT searches.

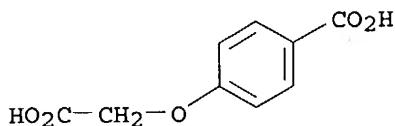
Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP  
PROPERTIES for more information. See STNote 27, Searching Properties  
in the CAS Registry File, for complete details:  
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

```
=> s carboxyphenoxyacetic acid
      12 CARBOXYPHENOXYACETIC
      5878231 ACID
L1      12 CARBOXYPHENOXYACETIC ACID
      (CARBOXYPHENOXYACETIC (W) ACID)
```

=> d 12

```
L1      ANSWER 12 OF 12 REGISTRY COPYRIGHT 2003 ACS
RN      19360-67-9 REGISTRY
CN      Benzoic acid, 4-(carboxymethoxy)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN      p-Anisic acid, .alpha.-carboxy- (6CI, 7CI, 8CI)
OTHER NAMES:
CN      4-Carboxy-1-(carboxymethoxy)benzene
CN      4-Carboxyphenoxyacetic acid
FS      3D CONCORD
MF      C9 H8 O5
CI      COM
LC      STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST,
      CSCHEM, HODOC*, IFICDB, IFIPAT, IFIUDB, MSDS-OHS, TOXCENTER, USPATFULL
      (*File contains numerically searchable property data)
Other Sources: EINECS**
      (**Enter CHEMLIST File for up-to-date regulatory information)
```



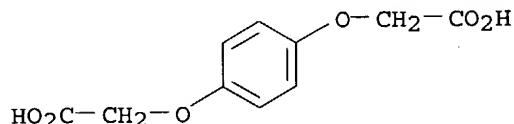
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

36 REFERENCES IN FILE CA (1957 TO DATE)
37 REFERENCES IN FILE CAPLUS (1957 TO DATE)
9 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> s hydroquinone o o diacetic acid  
 4380 HYDROQUINONE  
 2041178 O  
 2041178 O  
 7477 DIACETIC  
 5878231 ACID  
 L2 1 HYDROQUINONE O O DIACETIC ACID  
 (HYDROQUINONE (W) O (W) O (W) DIACETIC (W) ACID)

=> d

L2 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2003 ACS  
 RN 2245-53-6 REGISTRY  
 CN Acetic acid, 2,2'-[1,4-phenylenebis(oxy)]bis- (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN Acetic acid, (p-phenylenedioxy)di- (6CI, 7CI, 8CI)  
 OTHER NAMES:  
 CN 1,4-Bis(carboxymethoxy)benzene  
 CN 1,4-Dicarboxymethoxybenzene  
 CN 1,4-Phenylenedioxydiacetic acid  
 CN Hydroquinone-O,O-diacetic acid  
 FS 3D CONCORD  
 MF C10 H10 O6  
 CI COM  
 LC STN Files: BEILSTEIN\*, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST,  
 CSCHEM, IFICDB, IFIPAT, IFIUDB, TOXCENTER, USPATFULL  
 (\*File contains numerically searchable property data)  
 Other Sources: EINECS\*\*, NDSL\*\*, TSCA\*\*  
 (\*\*Enter CHEMLIST File for up-to-date regulatory information)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

61 REFERENCES IN FILE CA (1957 TO DATE)  
 5 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 62 REFERENCES IN FILE CAPLUS (1957 TO DATE)  
 7 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> s caroxy 0 anisic acid  
 0 CAROXY  
 496260 0  
 2744 ANISIC  
 5878231 ACID  
 L3 0 CAROXY 0 ANISIC ACID  
 (CAROXY (W) O (W) ANISIC (W) ACID)

=> s carboxy 0 anisic acid  
 268427 CARBOXY  
 496260 0  
 2744 ANISIC  
 5878231 ACID  
 L4 0 CARBOXY 0 ANISIC ACID  
 (CARBOXY (W) O (W) ANISIC (W) ACID)

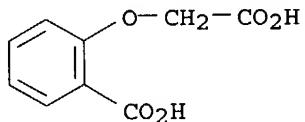
=> s carboxy and anisic acid  
 268427 CARBOXY  
 2744 ANISIC  
 5878231 ACID  
 2719 ANISIC ACID  
 (ANISIC(W)ACID)  
 L5 190 CARBOXY AND ANISIC ACID

=> d 190

L5 ANSWER 190 OF 190 REGISTRY COPYRIGHT 2003 ACS  
 RN 603-59-8 REGISTRY  
 CN Benzoic acid, 2-(carboxymethoxy)-, compd. with 1,2-dihydro-1,5-dimethyl-2-phenyl-3H-pyrazol-3-one (1:1) (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN 3H-Pyrazol-3-one, 1,2-dihydro-1,5-dimethyl-2-phenyl-,  
 mono[2-(carboxymethoxy)benzoate] (9CI)  
 CN Antipyrine, compd. with .alpha.-carboxy-o-anisic acid (1:1)  
 CN o-Anisic acid, .alpha.-carboxy-, compd. with antipyrine (1:1)  
 (8CI)  
 OTHER NAMES:  
 CN Antipyrine salicylacetate  
 DR 8048-45-1  
 MF C11 H12 N2 O . C9 H8 O5  
 LC STN Files: MRCK\*  
 (\*File contains numerically searchable property data)

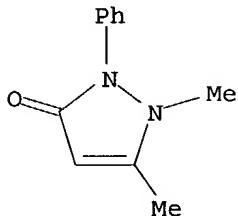
CM 1

CRN 635-53-0  
 CMF C9 H8 O5



CM 2

CRN 60-80-0  
 CMF C11 H12 N2 O



=> s anisic acid  
 2744 ANISIC  
 5878231 ACID  
 L6 2719 ANISIC ACID  
 (ANISIC(W)ACID)

=> s anisic acid/cn  
L7 1 ANISIC ACID/CN

=> d

L7 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2003 ACS  
RN 1335-08-6 REGISTRY  
CN Benzoic acid, methoxy- (9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN Anisic acid (8CI)  
OTHER NAMES:  
CN Methoxybenzoic acid  
MF C8 H8 O3  
CI IDS, COM  
LC STN Files: AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO, CA,  
CAPLUS, CBNB, CHEMCATS, CHEMLIST, CIN, CSCHEM, EMBASE, IFICDB, IFIPAT,  
IFIUDB, NAPRALERT, PROMT, TOXCENTER, USPATFULL  
Other Sources: EINECS\*\*  
(\*\*Enter CHEMLIST File for up-to-date regulatory information)



D1—O—Me

D1—CO<sub>2</sub>H

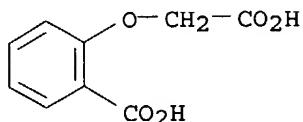
151 REFERENCES IN FILE CA (1957 TO DATE)  
6 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
151 REFERENCES IN FILE CAPLUS (1957 TO DATE)

=> s carboxy and anisic acid  
268427 CARBOXY  
2744 ANISIC  
5878231 ACID  
2719 ANISIC ACID  
(ANISIC(W)ACID)  
L8 190 CARBOXY AND ANISIC ACID

=> d 189

L8 ANSWER 189 OF 190 REGISTRY COPYRIGHT 2003 ACS  
RN 635-53-0 REGISTRY  
CN Benzoic acid, 2-(carboxymethoxy)- (9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN o-Anisic acid, .alpha.-carboxy- (6CI, 7CI, 8CI)  
OTHER NAMES:  
CN (2-Carboxyphenoxy)acetic acid  
CN (o-Carboxyphenoxy)acetic acid  
CN Acetic acid, (2-carboxyphenoxy)-  
CN o-(Carboxymethoxy)benzoic acid  
FS 3D CONCORD  
MF C9 H8 O5  
CI COM  
LC STN Files: BEILSTEIN\*, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST,  
CSCHEM, HODOC\*, IFICDB, IFIPAT, IFIUDB, RTECS\*, SPECINFO, USPATFULL  
(\*File contains numerically searchable property data)

Other Sources: NDSL\*\*, TSCA\*\*  
(\*\*Enter CHEMLIST File for up-to-date regulatory information)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

47 REFERENCES IN FILE CA (1957 TO DATE)  
47 REFERENCES IN FILE CAPLUS (1957 TO DATE)  
13 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> s resorcinol and diacetic acid

3633 RESORCINOL

7477 DIACETIC

5878231 ACID

7409 DIACETIC ACID

(DIACETIC(W)ACID)

L9 4 RESORCINOL AND DIACETIC ACID

=> d 4

L9 ANSWER 4 OF 4 REGISTRY COPYRIGHT 2003 ACS

RN 4959-46-0 REGISTRY

CN 2,6-Methano-3-benzazocine-6,11(1H)-diacetic acid,  
2,3,4,5-tetrahydro-8-methoxy-3-methyl-7-phenoxy-, diethyl ester, compd.  
with 2,4,6-trinitro-1,3-benzenediol (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 2,6-Methano-3-benzazocine-6,11(1H)-diacetic acid,  
2,3,4,5-tetrahydro-8-methoxy-3-methyl-7-phenoxy-, diethyl ester, compd.  
with 2,4,6-trinitroresorcinol, (-) - (8CI)

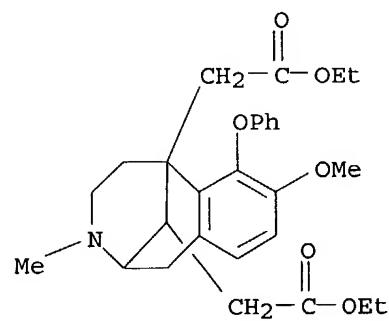
MF C28 H35 N O6 . x C6 H3 N3 O8

LC STN Files: CAOLD

CM 1

CRN 47758-73-6

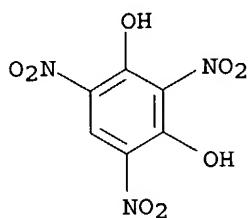
CMF C28 H35 N O6



CM 2

CRN 82-71-3

CMF C6 H3 N3 O8



1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> d 1-3

L9 ANSWER 1 OF 4 REGISTRY COPYRIGHT 2003 ACS  
 RN 98507-54-1 REGISTRY  
 CN Glycine, N-(carboxymethyl)-, polymer with 1,3-benzenediol and formaldehyde (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN 1,3-Benzenediol, polymer with N-(carboxymethyl)glycine and formaldehyde (9CI)  
 CN Formaldehyde, polymer with 1,3-benzenediol and N-(carboxymethyl)glycine (9CI)  
 OTHER NAMES:  
 CN **Formaldehyde-resorcinol-iminodiacetic acid copolymer**  
 MF (C<sub>6</sub> H<sub>6</sub> O<sub>2</sub> . C<sub>4</sub> H<sub>7</sub> N O<sub>4</sub> . C H<sub>2</sub> O)x  
 CI PMS  
 PCT Phenolic resin, Polyamine, Polyester, Polyester formed  
 SR CA  
 LC STN Files: CA, CAPLUS

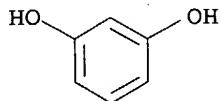
CM 1

CRN 142-73-4  
 CMF C<sub>4</sub> H<sub>7</sub> N O<sub>4</sub>



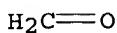
CM 2

CRN 108-46-3  
 CMF C<sub>6</sub> H<sub>6</sub> O<sub>2</sub>



CM 3

CRN 50-00-0  
 CMF C H<sub>2</sub> O



3 REFERENCES IN FILE CA (1957 TO DATE)  
3 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L9 ANSWER 2 OF 4 REGISTRY COPYRIGHT 2003 ACS

RN 75571-98-1 REGISTRY

CN Glycine, N-(carboxymethyl)-, polymer with 1,3-benzenediol,  
1,2-ethanediylbis[carbamodithioic acid] disodium salt and formaldehyde  
(9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 1,3-Benzenediol, polymer with N-(carboxymethyl)glycine,  
1,2-ethanediylbis[carbamodithioic acid] disodium salt and formaldehyde  
(9CI)

CN Carbamodithioic acid, 1,2-ethanediylbis-, disodium salt, polymer with  
1,3-benzenediol, N-(carboxymethyl)glycine and formaldehyde (9CI)

CN Formaldehyde, polymer with 1,3-benzenediol, N-(carboxymethyl)glycine and  
1,2-ethanediylbis[carbamodithioic acid] disodium salt (9CI)

OTHER NAMES:

CN N,N'-Ethylenebis(carbamodithioic acid) sodium salt-formaldehyde-  
iminodiacetic acid-resorcinol copolymer

MF (C<sub>6</sub> H<sub>6</sub> O<sub>2</sub> . C<sub>4</sub> H<sub>8</sub> N<sub>2</sub> S<sub>4</sub> . C<sub>4</sub> H<sub>7</sub> N O<sub>4</sub> . C H<sub>2</sub> O . 2 Na)x

CI PMS

PCT Phenolic resin, Polyamine, Polyester, Polyester formed, Polyether

LC STN Files: CA, CAPLUS, TOXCENTER

CM 1

CRN 142-73-4

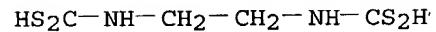
CMF C<sub>4</sub> H<sub>7</sub> N O<sub>4</sub>



CM 2

CRN 142-59-6 (111-54-6)

CMF C<sub>4</sub> H<sub>8</sub> N<sub>2</sub> S<sub>4</sub> . 2 Na

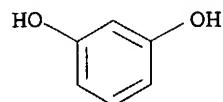


●2 Na

CM 3

CRN 108-46-3

CMF C<sub>6</sub> H<sub>6</sub> O<sub>2</sub>



CM 4

CRN 50-00-0

CMF C H<sub>2</sub> O

H<sub>2</sub>C=O

1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L9 ANSWER 3 OF 4 REGISTRY COPYRIGHT 2003 ACS

RN 50658-97-4 REGISTRY

CN Glycine, N-(carboxymethyl)-N-(2-hydroxyphenyl)-, polymer with  
1,3-benzenediol and formaldehyde (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 1,3-Benzenediol, polymer with N-(carboxymethyl)-N-(2-hydroxyphenyl)glycine  
and formaldehyde (9CI)

CN Formaldehyde, polymer with 1,3-benzenediol and N-(carboxymethyl)-N-(2-  
hydroxyphenyl)glycine (9CI)

OTHER NAMES:

CN **Formaldehyde-o-hydroxyphenyliminodiacetic acid-resorcinol polymer**

MF (C<sub>10</sub> H<sub>11</sub> N O<sub>5</sub> . C<sub>6</sub> H<sub>6</sub> O<sub>2</sub> . C H<sub>2</sub> O)x

CI PMS

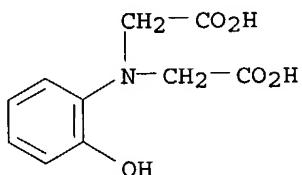
PCT Phenolic resin, Polyamine, Polyester, Polyester formed

LC STN Files: CA, CAPLUS

CM 1

CRN 6243-03-4

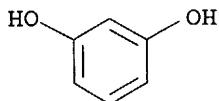
CMF C<sub>10</sub> H<sub>11</sub> N O<sub>5</sub>



CM 2

CRN 108-46-3

CMF C<sub>6</sub> H<sub>6</sub> O<sub>2</sub>



CM 3

CRN 50-00-0

CMF C H<sub>2</sub> O

H<sub>2</sub>C=O

1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

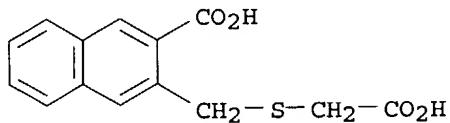
=> s naphthalenecarboxylic acid  
 28954 NAPHTHALENECARBOXYLIC  
 5878231 ACID  
 L10 28918 NAPHTHALENECARBOXYLIC ACID  
 (NAPHTHALENECARBOXYLIC (W) ACID)

=> s carboxymethyl and thio and naphthalenecarboxylic acid  
 53063 CARBOXYMETHYL  
 1681644 THIO  
 28954 NAPHTHALENECARBOXYLIC  
 5878231 ACID  
 28918 NAPHTHALENECARBOXYLIC ACID  
 (NAPHTHALENECARBOXYLIC (W) ACID)

L11 6 CARBOXYMETHYL AND THIO AND NAPHTHALENECARBOXYLIC ACID

=> d 6

L11 ANSWER 6 OF 6 REGISTRY COPYRIGHT 2003 ACS  
 RN 35977-79-8 REGISTRY  
 CN 2-Naphthalenecarboxylic acid, 3-[[[(carboxymethyl)thio]methyl]-  
 (9CI) (CA INDEX NAME)  
 FS 3D CONCORD  
 MF C14 H12 O4 S  
 LC STN Files: BEILSTEIN\*, CA, CAPLUS  
 (\*File contains numerically searchable property data)

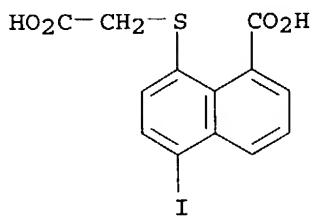


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

=> d 5

L11 ANSWER 5 OF 6 REGISTRY COPYRIGHT 2003 ACS  
 RN 50716-49-9 REGISTRY  
 CN 1-Naphthalenecarboxylic acid, 8-[(carboxymethyl)thio]-5-iodo-  
 (9CI) (CA INDEX NAME)  
 MF C13 H9 I O4 S  
 LC STN Files: BEILSTEIN\*, CA, CAPLUS  
 (\*File contains numerically searchable property data)

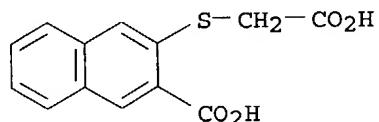


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

=> d 4

L11 ANSWER 4 OF 6 REGISTRY COPYRIGHT 2003 ACS  
RN 64289-70-9 REGISTRY  
CN 2-Naphthalenecarboxylic acid, 3-[(carboxymethyl)thio]- (9CI)  
(CA INDEX NAME)  
FS 3D CONCORD  
MF C13 H10 O4 S  
LC STN Files: BEILSTEIN\*, CA, CAPLUS, CASREACT  
(\*File contains numerically searchable property data)

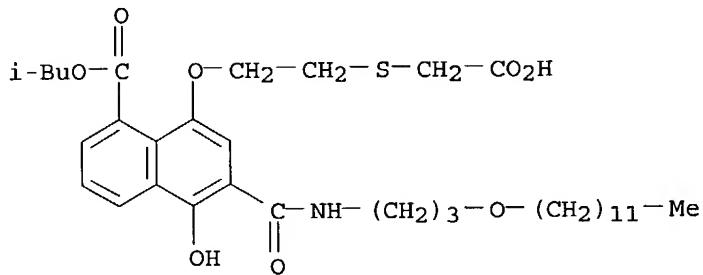


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

2 REFERENCES IN FILE CA (1957 TO DATE)  
2 REFERENCES IN FILE CAPLUS (1957 TO DATE)

=> d 1-3

L11 ANSWER 1 OF 6 REGISTRY COPYRIGHT 2003 ACS  
RN 190247-17-7 REGISTRY  
CN 1-Naphthalenecarboxylic acid, 8-[2-[(carboxymethyl)thio]ethoxy]-6-  
[[[3-(dodecyloxy)propyl]amino]carbonyl]-5-hydroxy-, 1-(2-methylpropyl)  
ester (9CI) (CA INDEX NAME)  
MF C35 H53 N O8 S  
SR CA  
LC STN Files: CA, CAPLUS

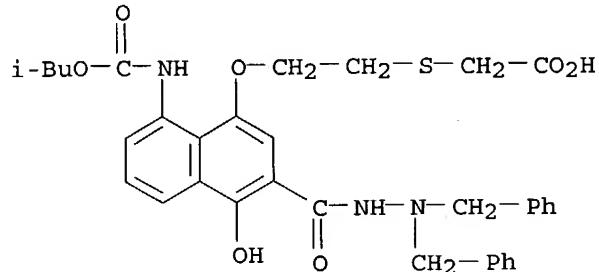


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L11 ANSWER 2 OF 6 REGISTRY COPYRIGHT 2003 ACS  
RN 174705-08-9 REGISTRY  
CN 2-Naphthalenecarboxylic acid, 4-[(2-[(carboxymethyl)thio]ethoxy)-1-  
hydroxy-5-[[[2-methylpropoxy]carbonyl]amino]-, 2-[2,2-

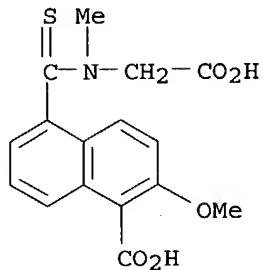
bis(phenylmethyl)hydrazide] (9CI) (CA INDEX NAME)  
 FS 3D CONCORD  
 MF C34 H37 N3 O7 S  
 SR CA  
 LC STN Files: CA, CAPLUS



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L11 ANSWER 3 OF 6 REGISTRY COPYRIGHT 2003 ACS  
 RN 129357-51-3 REGISTRY  
 CN 1-Naphthalenecarboxylic acid, 5-[[[(carboxymethyl)methylamino]thioxome  
thyl]-2-methoxy- (9CI) (CA INDEX NAME)  
 FS 3D CONCORD  
 MF C16 H15 N O5 S  
 SR CA  
 LC STN Files: BEILSTEIN\*, CA, CAPLUS  
 (\*File contains numerically searchable property data)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

=> s carboxymethylthio adj benzoic acid  
 162 CARBOXYMETHYLTHIO  
 3 ADJ  
 565969 BENZOIC  
 5878231 ACID  
 L12 0 CARBOXYMETHYLTHIO ADJ BENZOIC ACID  
 (CARBOXYMETHYLTHIO(W)ADJ(W)BENZOIC(W)ACID)

=> s carboxymethylthio and benzo?  
 162 CARBOXYMETHYLTHIO

2690358 BENZO?  
L13 18 CARBOXYMETHYLTHIO AND BENZO?

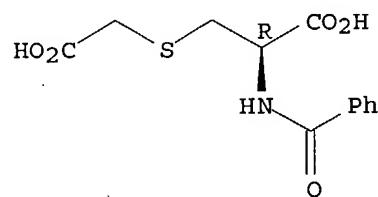
=> d 1-18

L13 ANSWER 1 OF 18 REGISTRY COPYRIGHT 2003 ACS  
RN 121394-60-3 REGISTRY  
CN Alanine, N-benzoyl-3-(carboxymethylthio)-, compd. with  
2-benzyl-2-thiopseudourea (1:2), L- (6CI) (CA INDEX NAME)  
FS STEREOSEARCH  
MF C12 H13 N O5 S . 2 C8 H10 N2 S  
SR CAOLD  
LC STN Files: CAOLD

CM 1

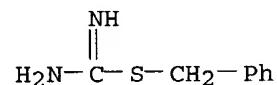
CRN 6332-29-2  
CMF C12 H13 N O5 S

Absolute stereochemistry.



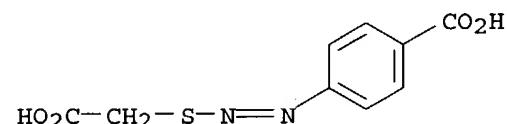
CM 2

CRN 621-85-2  
CMF C8 H10 N2 S



1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L13 ANSWER 2 OF 18 REGISTRY COPYRIGHT 2003 ACS  
RN 108128-50-3 REGISTRY  
CN Benzoic acid, p-(carboxymethylthioazo)- (6CI) (CA INDEX NAME)  
FS 3D CONCORD  
MF C9 H8 N2 O4 S  
SR CAOLD  
LC STN Files: BEILSTEIN\*, CA, CAOLD, CAPLUS  
(\*File contains numerically searchable property data)

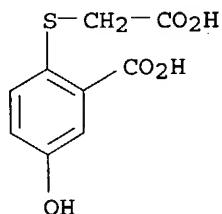


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1957 TO DATE)

1 REFERENCES IN FILE CAPLUS (1957 TO DATE)  
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

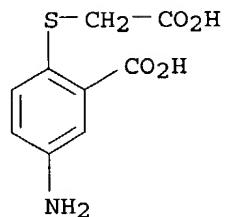
L13 ANSWER 3 OF 18 REGISTRY COPYRIGHT 2003 ACS  
RN 108085-53-6 REGISTRY  
CN Benzoic acid, 2-(carboxymethylthio)-5-hydroxy- (6CI) (CA INDEX NAME)  
FS 3D CONCORD  
MF C9 H8 O5 S  
SR CAOLD  
LC STN Files: BEILSTEIN\*, CA, CAOLD, CAPLUS  
(\*File contains numerically searchable property data)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)  
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L13 ANSWER 4 OF 18 REGISTRY COPYRIGHT 2003 ACS  
RN 103324-88-5 REGISTRY  
CN Benzoic acid, 5-amino-2-(carboxymethylthio)- (6CI) (CA INDEX NAME)  
FS 3D CONCORD  
MF C9 H9 N O4 S  
SR CAOLD  
LC STN Files: BEILSTEIN\*, CA, CAOLD, CAPLUS, CHEMCATS  
(\*File contains numerically searchable property data)

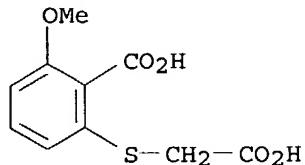


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

2 REFERENCES IN FILE CA (1957 TO DATE)  
2 REFERENCES IN FILE CAPLUS (1957 TO DATE)  
2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L13 ANSWER 5 OF 18 REGISTRY COPYRIGHT 2003 ACS  
RN 103204-98-4 REGISTRY  
CN Benzoic acid, 2-[(carboxymethyl)thio]-6-methoxy- (9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN o-Anisic acid, 6-(carboxymethylthio)- (6CI)

FS 3D CONCORD  
 MF C10 H10 O5 S  
 SR CAOLD  
 LC STN Files: BEILSTEIN\*, CA, CAOLD, CAPLUS, CASREACT  
 (\*File contains numerically searchable property data)



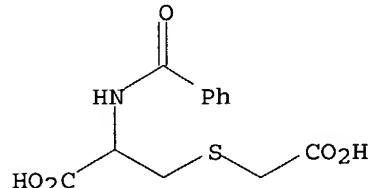
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

2 REFERENCES IN FILE CA (1957 TO DATE)  
 2 REFERENCES IN FILE CAPLUS (1957 TO DATE)  
 1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L13 ANSWER 6 OF 18 REGISTRY COPYRIGHT 2003 ACS  
 RN 102157-79-9 REGISTRY  
 CN Alanine, N-benzoyl-3-(carboxymethylthio)-, compd. with  
 2-benzyl-2-thiopseudourea (6CI) (CA INDEX NAME)  
 MF C12 H13 N O5 S . C8 H10 N2 S  
 SR CAOLD  
 LC STN Files: CAOLD

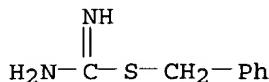
CM 1

CRN 121470-73-3  
 CMF C12 H13 N O5 S



CM 2

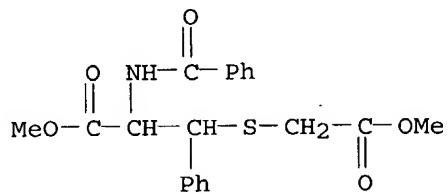
CRN 621-85-2  
 CMF C8 H10 N2 S



1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L13 ANSWER 7 OF 18 REGISTRY COPYRIGHT 2003 ACS  
 RN 102012-97-5 REGISTRY  
 CN Alanine, N-benzoyl-3-(carboxymethylthio)-3-phenyl-, dimethyl ester  
 (6CI) (CA INDEX NAME)  
 FS 3D CONCORD  
 MF C20 H21 N O5 S

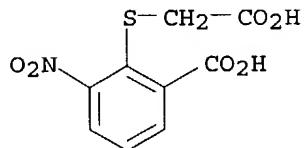
SR CAOLD  
LC STN Files: BEILSTEIN\*, CA, CAOLD, CAPLUS  
(\*File contains numerically searchable property data)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

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1 REFERENCES IN FILE CAPLUS (1957 TO DATE)  
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

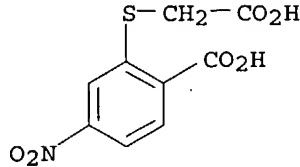
L13 ANSWER 8 OF 18 REGISTRY COPYRIGHT 2003 ACS  
RN 101714-45-8 REGISTRY  
CN Benzoic acid, 2-(carboxymethylthio)-3-nitro- (6CI) (CA INDEX  
NAME)  
FS 3D CONCORD  
MF C9 H7 N O6 S  
SR CAOLD  
LC STN Files: CA, CAOLD, CAPLUS



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)  
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

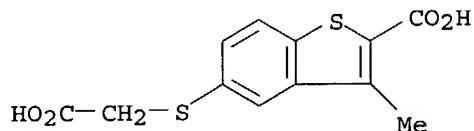
L13 ANSWER 9 OF 18 REGISTRY COPYRIGHT 2003 ACS  
RN 101714-12-9 REGISTRY  
CN Benzoic acid, 2-(carboxymethylthio)-4-nitro- (6CI) (CA INDEX  
NAME)  
FS 3D CONCORD  
MF C9 H7 N O6 S  
SR CAOLD  
LC STN Files: BEILSTEIN\*, CA, CAOLD, CAPLUS  
(\*File contains numerically searchable property data)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

2 REFERENCES IN FILE CA (1957 TO DATE)  
2 REFERENCES IN FILE CAPLUS (1957 TO DATE)  
2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

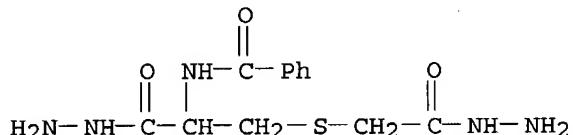
L13 ANSWER 10 OF 18 REGISTRY COPYRIGHT 2003 ACS  
RN 100953-29-5 REGISTRY  
CN Benzo[b]thiophene-2-carboxylic acid, 5-(carboxymethylthio)-3-methyl-  
(6CI) (CA INDEX NAME)  
FS 3D CONCORD  
MF C12 H10 O4 S2  
SR CAOLD  
LC STN Files: BEILSTEIN\*, CA, CAOLD, CAPLUS  
(\*File contains numerically searchable property data)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)  
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

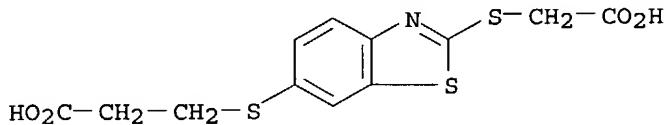
L13 ANSWER 11 OF 18 REGISTRY COPYRIGHT 2003 ACS  
RN 100319-13-9 REGISTRY  
CN Alanine, N-benzoyl-3-(carboxymethylthio)-, dihydrazide (6CI)  
(CA INDEX NAME)  
FS 3D CONCORD  
MF C12 H17 N5 O3 S  
SR CAOLD  
LC STN Files: BEILSTEIN\*, CAOLD  
(\*File contains numerically searchable property data)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

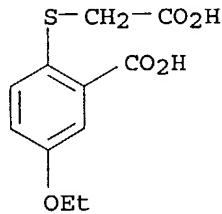
L13 ANSWER 12 OF 18 REGISTRY COPYRIGHT 2003 ACS  
RN 99988-76-8 REGISTRY  
CN Propionic acid, 3-[2-(carboxymethylthio)-6-benzothiazolylthio]-  
(6CI) (CA INDEX NAME)  
FS 3D CONCORD  
MF C12 H11 N O4 S3  
SR CAOLD  
LC STN Files: BEILSTEIN\*, CA, CAOLD, CAPLUS  
(\*File contains numerically searchable property data)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)  
 1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

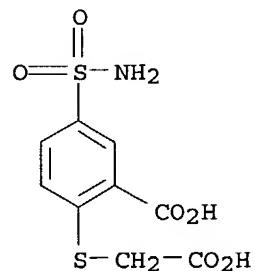
L13 ANSWER 13 OF 18 REGISTRY COPYRIGHT 2003 ACS  
 RN 99866-05-4 REGISTRY  
 CN Benzoic acid, 2-(carboxymethylthio)-5-ethoxy- (6CI) (CA INDEX  
 NAME)  
 FS 3D CONCORD  
 MF C11 H12 O5 S  
 SR CAOLD  
 LC STN Files: BEILSTEIN\*, CA, CAOLD, CAPLUS  
 (\*File contains numerically searchable property data)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)  
 1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

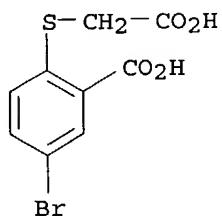
L13 ANSWER 14 OF 18 REGISTRY COPYRIGHT 2003 ACS  
 RN 99358-37-9 REGISTRY  
 CN Benzoic acid, 2-(carboxymethylthio)-5-sulfamoyl- (6CI) (CA  
 INDEX NAME)  
 FS 3D CONCORD  
 MF C9 H9 N O6 S2  
 SR CAOLD  
 LC STN Files: CA, CAOLD, CAPLUS



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)  
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

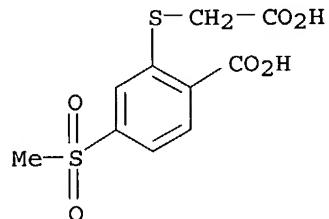
L13 ANSWER 15 OF 18 REGISTRY COPYRIGHT 2003 ACS  
RN 99067-28-4 REGISTRY  
CN Benzoic acid, 5-bromo-2-(carboxymethylthio)- (6CI) (CA INDEX  
NAME)  
FS 3D CONCORD  
MF C9 H7 Br O4 S  
SR CAOLD  
LC STN Files: BEILSTEIN\*, CA, CAOLD, CAPLUS  
(\*File contains numerically searchable property data)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

2 REFERENCES IN FILE CA (1957 TO DATE)  
2 REFERENCES IN FILE CAPLUS (1957 TO DATE)  
2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L13 ANSWER 16 OF 18 REGISTRY COPYRIGHT 2003 ACS  
RN 99059-45-7 REGISTRY  
CN Benzoic acid, 2-(carboxymethylthio)-4-(methylsulfonyl)- (6CI)  
(CA INDEX NAME)  
FS 3D CONCORD  
MF C10 H10 O6 S2  
SR CAOLD  
LC STN Files: BEILSTEIN\*, CA, CAOLD, CAPLUS  
(\*File contains numerically searchable property data)

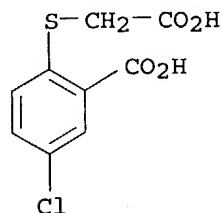


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)  
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L13 ANSWER 17 OF 18 REGISTRY COPYRIGHT 2003 ACS  
RN 98588-73-9 REGISTRY

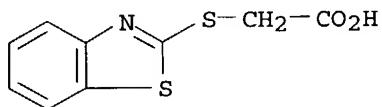
CN Benzoic acid, 2-(carboxymethylthio)-5-chloro- (6CI) (CA INDEX  
 NAME)  
 FS 3D CONCORD  
 MF C9 H7 Cl O4 S  
 SR CAOLD  
 LC STN Files: BEILSTEIN\*, CA, CAOLD, CAPLUS  
 (\*File contains numerically searchable property data)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)  
 1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L13 ANSWER 18 OF 18 REGISTRY COPYRIGHT 2003 ACS  
 RN 6295-57-4 REGISTRY  
 CN Acetic acid, (2-benzothiazolylthio)- (6CI, 7CI, 8CI, 9CI) (CA  
 INDEX NAME)  
 OTHER NAMES:  
 CN (2-Benzothiazolylthio)acetic acid  
 CN 2-(2-Benzothiazolylthio)acetic acid  
 CN 2-Carboxymethylthiobenzothiazole  
 CN S-2-Benzothiazolylthioglycolic acid  
 CN Sanbit ABT  
 FS 3D CONCORD  
 MF C9 H7 N O2 S2  
 CI COM  
 LC STN Files: BEILSTEIN\*, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS,  
 CHEMINFORMRX, CHEMLIST, IPA, MEDLINE, SPECINFO, TOXCENTER, USPATFULL  
 (\*File contains numerically searchable property data)  
 Other Sources: EINECS\*\*, NDSL\*\*, TSCA\*\*  
 (\*\*Enter CHEMLIST File for up-to-date regulatory information)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

86 REFERENCES IN FILE CA (1957 TO DATE)  
 3 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 86 REFERENCES IN FILE CAPLUS (1957 TO DATE)  
 9 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> file ca  
 COST IN U.S. DOLLARS  
 FULL ESTIMATED COST

| SINCE FILE<br>ENTRY | TOTAL<br>SESSION |
|---------------------|------------------|
| 226.82              | 227.03           |

FILE 'CA' ENTERED AT 16:23:05 ON 30 APR 2003  
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FILE COVERS 1907 - 24 Apr 2003 VOL 138 ISS 18  
FILE LAST UPDATED: 24 Apr 2003 (20030424/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 101714-12-9

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Substance data SEARCH and crossover from CAS REGISTRY in progress...  
Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

L15                   2 L14

=> d 1-2

L15 ANSWER 1 OF 2 CA COPYRIGHT 2003 ACS  
AN 54:114201 CA  
OREF 54:21763h-i,21764h-i  
TI Thioindigoid dyes. III. Dinitro-substituted thioindigo derivatives  
AU Dokunikhin, N. S.; Gerasimenko, Yu. E.  
CS K. E. Voroshilov Research Inst. Org. Intermediates and Dyes, Moscow  
SO Zhur. Obshchey Khim. (1960), 30, 635-8  
DT Journal  
LA Unavailable

L15 ANSWER 2 OF 2 CA COPYRIGHT 2003 ACS  
AN 52:11079 CA  
OREF 52:1991d-i,1992a  
TI Some bz-nitrothioindoxyls  
AU Martani, Alfio  
CS Univ. Perugia, Italy  
SO Ann. chim. (Rome) (1957), 47, 885-91  
DT Journal  
LA Unavailable

=> s photo? and (ir or infrared or infra red)  
1143616 PHOTO?  
492857 IR  
221359 INFRARED  
3776 INFRA

326624 RED  
3341 INFRA RED  
(INFRA(W) RED)

L16 62628 PHOTO? AND (IR OR INFRARED OR INFRA RED)

=> s l16 and carboxymethyl  
28062 CARBOXYMETHYL

L17 34 L16 AND CARBOXYMETHYL

=> d ti

L17 ANSWER 1 OF 34 CA COPYRIGHT 2003 ACS  
TI Diagnostic imaging compositions, their methods of synthesis, and use

=> d ti 1-34

L17 ANSWER 1 OF 34 CA COPYRIGHT 2003 ACS  
TI Diagnostic imaging compositions, their methods of synthesis, and use

L17 ANSWER 2 OF 34 CA COPYRIGHT 2003 ACS  
TI Efficient visible light sensitization of water-soluble near-infrared luminescent lanthanide complexes

L17 ANSWER 3 OF 34 CA COPYRIGHT 2003 ACS  
TI Processing of tetrazolium-containing silver halide photographic material with mercapto compound-containing developer to improve characteristic and dot quality

L17 ANSWER 4 OF 34 CA COPYRIGHT 2003 ACS  
TI Photocuring method by shielding oxygen on the surface of photocurable materials

L17 ANSWER 5 OF 34 CA COPYRIGHT 2003 ACS  
TI Electron Spin Resonance Studies of Photocatalytic Interface Reactions of Suspended M/TiO<sub>2</sub> (M = Pt, Pd, Ir, Rh, Os, or Ru) with Alcohol and Acetic Acid in Aqueous Media

L17 ANSWER 6 OF 34 CA COPYRIGHT 2003 ACS  
TI Photocrosslinking of water-soluble polymers bearing a pendant cyclohexene moiety

L17 ANSWER 7 OF 34 CA COPYRIGHT 2003 ACS  
TI Development of silver halide photographic material by coating-application of developing solution

L17 ANSWER 8 OF 34 CA COPYRIGHT 2003 ACS  
TI Photoacoustic FT-IR study on keratin chemically bound on the surface of silica gel particles

L17 ANSWER 9 OF 34 CA COPYRIGHT 2003 ACS  
TI Substantivity through cationic substitution

L17 ANSWER 10 OF 34 CA COPYRIGHT 2003 ACS  
TI Method of silver image formation

L17 ANSWER 11 OF 34 CA COPYRIGHT 2003 ACS  
TI Photoelectrochemical studies of electrodes coated with merocyanine dye

L17 ANSWER 12 OF 34 CA COPYRIGHT 2003 ACS  
TI Bonding in silver complexes of carboxylic acid substituted thionamides examined by infrared, laser-Raman, and x-ray photoelectron spectroscopy

L17 ANSWER 13 OF 34 CA COPYRIGHT 2003 ACS  
TI Study of the effect of uv radiation on carboxyl-containing cellulose materials

L17 ANSWER 14 OF 34 CA COPYRIGHT 2003 ACS  
TI Rapid hardening cement.. III. Effects of keto carboxylic acids on the hydration of calcium sulfate hemihydrate

L17 ANSWER 15 OF 34 CA COPYRIGHT 2003 ACS  
TI Addition compounds of bis(salicylaldehyde)ethylenediaminecopper. X. Synthesis of 3-(carboxyalkyl)salicylaldehyde derivatives and their copper chelates

L17 ANSWER 16 OF 34 CA COPYRIGHT 2003 ACS  
TI Decomposable thermoplastic compositions

L17 ANSWER 17 OF 34 CA COPYRIGHT 2003 ACS  
TI The preparation of biochemically interesting thio ethers of estrogens. II. 2-Methoxy-4-(carboxymethylthio)estrone 3-methyl ethers

L17 ANSWER 18 OF 34 CA COPYRIGHT 2003 ACS  
TI Preparation and coordination studies of the complex acid, dihydrogen diethylenetriaminepentaacetatoferate(III) dihydrate, and several of its metal(I) salts

L17 ANSWER 19 OF 34 CA COPYRIGHT 2003 ACS  
TI Structure of metal complexes of anthranyldiacetic acid

L17 ANSWER 20 OF 34 CA COPYRIGHT 2003 ACS  
TI Heat-sensitive copying material

L17 ANSWER 21 OF 34 CA COPYRIGHT 2003 ACS  
TI Synthetic studies leading to dl-telekin and dl-alantolactone

L17 ANSWER 22 OF 34 CA COPYRIGHT 2003 ACS  
TI Photolysis of silver alginate and silver carboxymethyl cellulose

L17 ANSWER 23 OF 34 CA COPYRIGHT 2003 ACS  
TI Halogen containing heterocyclic compounds. II. Halogenation of furfuryl derivatives-maleic anhydride adduct

L17 ANSWER 24 OF 34 CA COPYRIGHT 2003 ACS  
TI Light-sensitive materials with incorporated developing agents

L17 ANSWER 25 OF 34 CA COPYRIGHT 2003 ACS  
TI Synthesis of cyclobutane derivatives from unsaturated fatty acid esters. Photochemical reactions of muconic acid dimethyl ester and sorbic acid methyl ester

L17 ANSWER 26 OF 34 CA COPYRIGHT 2003 ACS  
TI Grafting of poly(vinyl chloride) (PVC) on cellulose and its derivatives

L17 ANSWER 27 OF 34 CA COPYRIGHT 2003 ACS  
TI Photochemical reactions. XVII. Photochemical transformations of O-acetyl-1-dehydrotestosterone. 2

L17 ANSWER 28 OF 34 CA COPYRIGHT 2003 ACS  
TI Thermographic formation of images in plastic films

L17 ANSWER 29 OF 34 CA COPYRIGHT 2003 ACS  
TI Photographic filter layer

L17 ANSWER 30 OF 34 CA COPYRIGHT 2003 ACS  
TI Couplers for photographic emulsions

L17 ANSWER 31 OF 34 CA COPYRIGHT 2003 ACS  
 TI Cupric complexes as infrared-absorbing filters

L17 ANSWER 32 OF 34 CA COPYRIGHT 2003 ACS  
 TI Stereospecific synthesis of (+)-O-methylpsychotrine and (-)-emetine

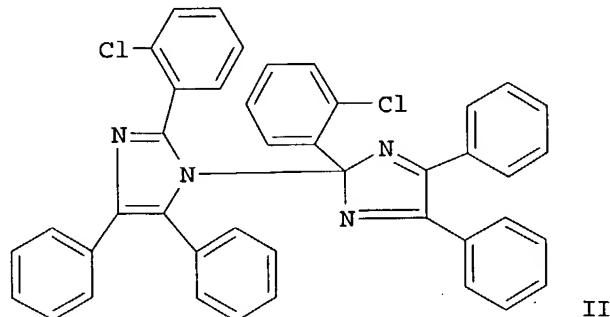
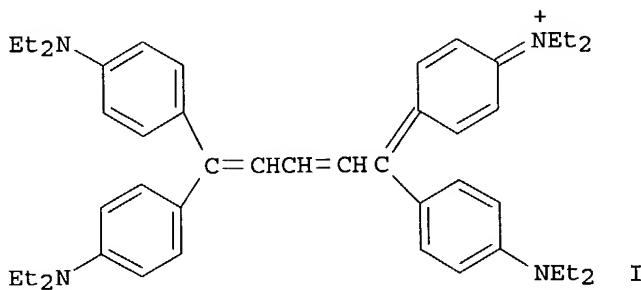
L17 ANSWER 33 OF 34 CA COPYRIGHT 2003 ACS  
 TI Stereochemistry of tropane alkaloids. IX. Selective quaternization of  
 3.alpha.- and 3.beta.-tropanol and of their derivatives

L17 ANSWER 34 OF 34 CA COPYRIGHT 2003 ACS  
 TI Forming films

=> d 4,6,13 all

L17 ANSWER 4 OF 34 CA COPYRIGHT 2003 ACS  
 AN 128:154902 CA  
 TI Photocuring method by shielding oxygen on the surface of  
 photocurable materials  
 IN Kamata, Hirotoshi; Watanabe, Takeo; Oga, Kazuhiko; Sugita, Shuichi  
 PA Showa Denko K. K., Japan  
 SO Jpn. Kokai Tokkyo Koho, 11 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM C08F002-48  
 ICS B29C067-00; C08F002-44; C09D004-00; C09D201-00  
 CC 37-6 (Plastics Manufacture and Processing)  
 Section cross-reference(s): 42  
 FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 10007707    | A2   | 19980113 | JP 1996-164728  | 19960625 |
| PRAI | JP 1996-164728 |      | 19960625 |                 |          |
| GI   |                |      |          |                 |          |



AB A method includes applying aq. solns. of film-formable water-sol. org. polymers on the surface of **photocurable** materials to shield O in the air and irradiating with visible ray and near-IR ray. The films made from the water-sol. org. polymers can be easily removed after **photocuring**. Preferably, the **photocurable** materials contain (A) ethylenically unsatd. compds., (B) near-IR radical polymn. initiators, (C) visible ray radical polymn. initiators, and (D) .gt;req.1 filler chosen from pigments, dyes, extender pigments, and fiber reinforcers. Thus, a compn. comprising Ripoxy SP 1509 75, styrene 25, talc 100, I butyltriphenylborate 0.10, tetrabutylammonium butyltriphenylborate 0.50, II 0.50, and 2-mercaptophenothiazole 0.50 part, was poured into a mold, coated with aq. 5% Poval 217 (III) on the surface of the compn., irradiated, and freed of the III film to give a cured product having a tack-free surface.

ST oxygen shield coating radical **photocuring**; vinyl ester styrene **photocuring**; polymn inhibitor oxygen shield

IT Polyoxalkylenes, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(PEO 15, coatings; **photocuring** method by coating with water-sol. polymers for shielding oxygen on **photocurable** compn. surfaces)

IT Epoxy resins, preparation  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PREP (Preparation); USES (Uses)  
(acrylates, polymers with styrene, **photocured**,  
**photocuring** method by coating with water-sol. polymers for shielding oxygen on **photocurable** compn. surfaces)

IT Polyesters, preparation  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PREP (Preparation); USES (Uses)  
(acrylic, **photocured**; **photocuring** method by coating with water-sol. polymers for shielding oxygen on **photocurable** compn. surfaces)

IT Gelatins, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(coatings; **photocuring** method by coating with water-sol. polymers for shielding oxygen on **photocurable** compn. surfaces)

IT Polymerization inhibitors  
(oxygen; **photocuring** method by coating with water-sol. polymers for shielding oxygen on **photocurable** compn. surfaces)

IT Polymerization catalysts  
Polymerization catalysts  
(photochem., radical; **photocuring** method by coating with water-sol. polymers for shielding oxygen on **photocurable** compn. surfaces)

IT Coating materials  
Shields  
(**photocuring** method by coating with water-sol. polymers for shielding oxygen on **photocurable** compn. surfaces)

IT Acrylic polymers, preparation  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PREP (Preparation); USES (Uses)  
(polyester-, **photocured**; **photocuring** method by coating with water-sol. polymers for shielding oxygen on **photocurable** compn. surfaces)

IT Polyesters, preparation  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PREP (Preparation); USES (Uses)  
(unsatd., **photocured**; **photocuring** method by coating with water-sol. polymers for shielding oxygen on **photocurable** compn. surfaces)

IT Polymers, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(water-sol.; photocuring method by coating with water-sol.  
polymers for shielding oxygen on photocurable compn.  
surfaces)

IT 25322-68-3, PEO 15  
RL: TEM (Technical or engineered material use); USES (Uses)  
(PEO 15, coatings; photocuring method by coating with  
water-sol. polymers for shielding oxygen on photocurable  
compn. surfaces)

IT 9002-89-5, Poval 217  
RL: TEM (Technical or engineered material use); USES (Uses)  
(Poval 217, coatings; photocuring method by coating with  
water-sol. polymers for shielding oxygen on photocurable  
compn. surfaces)

IT 9003-39-8, Polyvinylpyrrolidone 9004-32-4, Carboxymethyl  
cellulose sodium salt 9005-25-8, Starch, uses 9057-02-7, Pullulan  
28408-65-3, Poly(N-Vinylacetamide)  
RL: TEM (Technical or engineered material use); USES (Uses)  
(coatings; photocuring method by coating with water-sol.  
polymers for shielding oxygen on photocurable compn.  
surfaces)

IT 14807-96-6, Talc, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(extender pigment; photocuring method by coating with  
water-sol. polymers for shielding oxygen on photocurable  
compn. surfaces)

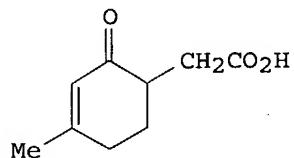
IT 54847-75-5P, Rigolac 2141 115856-61-6P 115980-50-2P 137803-90-8P,  
U-PICA 6424 202530-48-1P 202530-49-2P 202530-50-5P 202535-00-0P  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PREP  
(Preparation); USES (Uses)  
(photocured; photocuring method by coating with  
water-sol. polymers for shielding oxygen on photocurable  
compn. surfaces)

IT 199128-41-1P, Rigolac G 200GMA  
RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)  
(photocured; photocuring method by coating with  
water-sol. polymers for shielding oxygen on photocurable  
compn. surfaces)

IT 7782-44-7, Oxygen, uses  
RL: CAT (Catalyst use); USES (Uses)  
(photocuring method by coating with water-sol. polymers for  
shielding oxygen on photocurable compn. surfaces)

IT 99-97-8, N,N-Dimethyl-p-toluidine 102-71-6, Triethanolamine, uses  
103-01-5, n-Phenylglycine 134-81-6 149-30-4, 2-Mercaptobenzothiazole  
583-39-1 21245-01-2, Isoamyl p-dimethylaminobenzoate 79044-56-7  
96233-24-8 120307-06-4, Tetrabutylammonium butyltriphenylborate  
141714-54-7 159116-57-1 174285-64-4, Irgacure 1700 174914-36-4  
184591-58-0 189947-80-6 189947-84-0 189947-86-2 189947-87-3  
192642-08-3 202530-51-6 202530-52-7 202530-53-8 202530-54-9  
RL: CAT (Catalyst use); USES (Uses)  
(radical photopolymer catalyst; photocuring method  
by coating with water-sol. polymers for shielding oxygen on  
photocurable compn. surfaces)

L17 ANSWER 6 OF 34 CA COPYRIGHT 2003 ACS  
AN 119:9287 CA  
TI Photocrosslinking of water-soluble polymers bearing a pendant  
cyclohexene moiety  
AU Tsunooka, Masahiro; Amekawa, Yoshihide; Sashio, Minoru  
CS Coll. Eng., Univ. Osaka Prefect., Sakai, 591, Japan  
SO Journal of Photopolymer Science and Technology (1992), 5(2), 267-70  
CODEN: JSTEEW; ISSN: 0914-9244  
DT Journal  
LA English



I

AB Poly(vinyl alc.) (PVA) bearing a cyclohexenone moiety as a side chain was prep'd. by esterification of partially hydrolyzed poly(vinyl acetate) with carboxylic acid I in the presence of dicyclohexyl carbodiimide, followed by hydrolysis of acetoxy group under basic conditions. The photoreaction of the resulting PVA by irradn. at 254 nm was traced by taking UV spectra around 237 nm and IR absorptions at 1656 and 1714 cm<sup>-1</sup> by carbonyl. Photodimerization of .alpha.,.beta.-unsatd. ketone proceeded in the second order to the ketone, and the activation energy was 15.5 kJ/mol.

ST cyclohexene pendant polyvinyl alc photocrosslinking; crosslinking cyclohexene pendant polyvinyl alc

IT Crosslinking (photochem., of cyclohexenone-pendant poly(vinyl alc.), by photodimerization)

IT Dimerization (photochem., of cyclohexenone-pendant poly(vinyl alc.), crosslinking by)

IT 9003-20-7D, Poly(vinyl acetate), hydrolyzed, reaction products with 2-carboxymethyl-1-methylcyclohexen-3-one 20778-34-1D, reaction products with hydrolyzed poly(vinyl acetate)

RL: RCT (Reactant); RACT (Reactant or reagent)  
(crosslinking of, by photodimerization)

L17 ANSWER 13 OF 34 CA COPYRIGHT 2003 ACS  
AN 85:126056 CA

TI Study of the effect of uv radiation on carboxyl-containing cellulose materials

AU Savastenko, G. N.; Ermolenko, I. N.; Isichenko, A. D.

CS Inst. Obshch. Neorg. Khim., Minsk, USSR

SO Vestsi Akademii Navuk BSSR, Seryya Khimichnykh Navuk (1976), (4), 40-4  
CODEN: VBSKAK; ISSN: 0002-3590

DT Journal

LA Russian

CC 43-3 (Cellulose, Lignin, Paper, and Other Wood Products)

AB The uv irradn. of monocarboxyl cellulose (I) [9032-53-5] and CM-cellulose [9004-32-4] in vacuo with 2.1 .times. 10<sup>17</sup> quanta .times. cm<sup>-2</sup> .times. sec<sup>-1</sup> at subzero temp. (liq. N) and at ambient temp. showed that the intensity of ir absorption band at 1730 cm<sup>-1</sup>, characteristic of CO group vibrations, increased more rapidly during irradn. at subzero temps. than at ambient temp. The d.p. of I irradiated at subzero temp. for 30 min. remained essentially unchanged, but decreased rapidly following irradn. at ambient temp. The photolysis of I at ambient temp. gave H, CO, and CO<sub>2</sub> in molar ratios of 78.5:13.3:8.5. The relative content of CO increased when the photolysis of I was carried out at subzero temps.

ST carboxyl cellulose UV irradn; carboxymethyl cellulose irradiated IR; photolysis carboxyl cellulose

IT Photolysis (of carboxy cellulose, with uv light)

IT 9004-32-4 9032-53-5

IT RL: PROC (Process)  
(irradn. of, with uv light)

|  |  |            |         |
|--|--|------------|---------|
| => file reg                                |  | SINCE FILE | TOTAL   |
| COST IN U.S. DOLLARS                       |  | ENTRY      | SESSION |
| FULL ESTIMATED COST                        |  | 33.32      | 261.15  |
| DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) |  | SINCE FILE | TOTAL   |
| CA SUBSCRIBER PRICE                        |  | ENTRY      | SESSION |
|  |  | -1.86      | -1.86   |

FILE 'REGISTRY' ENTERED AT 16:26:23 ON 30 APR 2003  
 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
 PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
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Property values tagged with IC are from the ZIC/VINITI data file  
 provided by InfoChem.

STRUCTURE FILE UPDATES: 29 APR 2003 HIGHEST RN 507441-92-1  
 DICTIONARY FILE UPDATES: 29 APR 2003 HIGHEST RN 507441-92-1

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2003

Please note that search-term pricing does apply when  
 conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:  
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=> d his

(FILE 'HOME' ENTERED AT 16:12:39 ON 30 APR 2003)

FILE 'REGISTRY' ENTERED AT 16:12:51 ON 30 APR 2003

|     |   |
|-----|---|
| L1  | 12 S CARBOXPHENOXYACETIC ACID                             |
| L2  | 1 S HYDROQUINONE O O DIACETIC ACID                        |
| L3  | 0 S CAROXY O ANISIC ACID                                  |
| L4  | 0 S CARBOXY O ANISIC ACID                                 |
| L5  | 190 S CARBOXY AND ANISIC ACID                             |
| L6  | 2719 S ANISIC ACID  |
| L7  | 1 S ANISIC ACID/CN  |
| L8  | 190 S CARBOXY AND ANISIC ACID                             |
| L9  | 4 S RESORCINOL AND DIACETIC ACID                          |
| L10 | 28918 S NAPHTHALENECARBOXYLIC ACID                        |
| L11 | 6 S CARBOXYMETHYL AND THIO AND NAPHTHALENECARBOXYLIC ACID |
| L12 | 0 S CARBOXYMETHYLTBIO ADJ BENZOIC ACID                    |
| L13 | 18 S CARBOXYMETHYLTBIO AND BENZO?                         |

FILE 'CA' ENTERED AT 16:23:05 ON 30 APR 2003  
 S 101714-12-9/REG#

FILE 'REGISTRY' ENTERED AT 16:23:09 ON 30 APR 2003

L14 1 S 101714-12-9/RN

FILE 'CA' ENTERED AT 16:23:09 ON 30 APR 2003

|     |  |
|-----|--|
| L15 | 2 S L14  |
| L16 | 62628 S PHOTO? AND (IR OR INFRARED OR INFRA RED) |
| L17 | 34 S L16 AND CARBOXYMETHYL                       |

FILE 'REGISTRY' ENTERED AT 16:26:23 ON 30 APR 2003

=> s dianisidine and n and tetraacetic acid  
    41 DIANISIDINE  
    4635400 N  
    1226 TETRAACETIC  
    5878231 ACID  
        1219 TETRAACETIC ACID  
            (TETRAACETIC(W) ACID)  
L18          0 DIANISIDINE AND N AND TETRAACETIC ACID

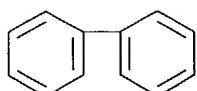
=> s dianisidine and tetraacetic acid  
    41 DIANISIDINE  
    1226 TETRAACETIC  
    5878231 ACID  
        1219 TETRAACETIC ACID  
            (TETRAACETIC(W) ACID)  
L19          0 DIANISIDINE AND TETRAACETIC ACID

=> s dianisidine and acetic acid  
    41 DIANISIDINE  
    645377 ACETIC  
    5878231 ACID  
        642742 ACETIC ACID  
            (ACETIC(W) ACID)  
L20          0 DIANISIDINE AND ACETIC ACID

=> s dianisidine and acid  
    41 DIANISIDINE  
    5878231 ACID  
L21          10 DIANISIDINE AND ACID

=> d 10

L21 ANSWER 10 OF 10 REGISTRY COPYRIGHT 2003 ACS  
RN 25619-70-9 REGISTRY  
CN 1,1'-Biphenyl, ar,ar'-diisocyanato-ar,ar'-dimethoxy- (9CI) (CA INDEX  
NAME)  
OTHER CA INDEX NAMES:  
CN Isocyanic acid, ar,ar'-dimethoxybiphenylene ester (7CI, 8CI)  
OTHER NAMES:  
CN Dianisidine diisocyanate  
MF C16 H12 N2 O4  
CI IDS, COM  
LC STN Files: CA, CAOLD, CAPLUS, CSCHEM, IFICDB, IFIPAT, IFIUDB, USPATFULL



2 ( D1-O-Me )

2 ( D1-NCO )

19 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
19 REFERENCES IN FILE CAPLUS (1957 TO DATE)  
4 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> d 1-9

L21 ANSWER 1 OF 10 REGISTRY COPYRIGHT 2003 ACS

RN 204991-86-6 REGISTRY

CN 2-Pentenedioic acid, 3-(4-methoxy-3-methylphenyl)-, polymer with  
3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diamine (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-, polymer with  
3-(4-methoxy-3-methylphenyl)-2-pentenedioic acid (9CI)

OTHER NAMES:

CN o-Dianisidine-.beta.- (4-methoxy-3-methylphenyl)glutaconic acid  
copolymer

MF (C<sub>14</sub> H<sub>16</sub> N<sub>2</sub> O<sub>2</sub> . C<sub>13</sub> H<sub>14</sub> O<sub>5</sub>)<sub>x</sub>

CI PMS

PCT Polyacrylic, Polyamide, Polyamide formed, Polystyrene, Polyvinyl

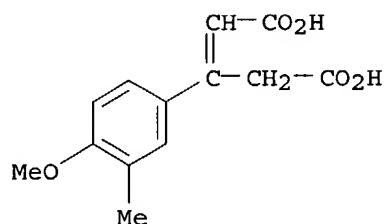
SR CA

LC STN Files: CA, CAPLUS

CM 1

CRN 67141-89-3

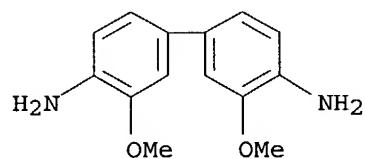
CMF C<sub>13</sub> H<sub>14</sub> O<sub>5</sub>



CM 2

CRN 119-90-4

CMF C<sub>14</sub> H<sub>16</sub> N<sub>2</sub> O<sub>2</sub>



1 REFERENCES IN FILE CA (1957 TO DATE)

1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L21 ANSWER 2 OF 10 REGISTRY COPYRIGHT 2003 ACS

RN 190328-20-2 REGISTRY

CN 1,4-Benzeneddicarbonyl dichloride, polymer with 1,4-benzenediamine,  
3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diamine and 4,4'-oxybis[benzenamine]  
(9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 1,4-Benzenediamine, polymer with 1,4-benzeneddicarbonyl dichloride,  
3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diamine and 4,4'-oxybis[benzenamine]  
(9CI)

CN Benzenamine, 4,4'-oxybis-, polymer with 1,4-benzenediamine,  
1,4-benzeneddicarbonyl dichloride and 3,3'-dimethoxy[1,1'-biphenyl]-4,4'-

diamine (9CI)  
CN [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-, polymer with  
1,4-benzenediamine, 1,4-benzenedicarbonyl dichloride and  
4,4'-oxybis[benzenamine] (9CI)

OTHER NAMES:

CN 4,4'-Diaminodiphenyl ether-o-dianisidine-p-phenylenediamine-  
terephthalic acid chloride copolymer

MF (C<sub>14</sub> H<sub>16</sub> N<sub>2</sub> O<sub>2</sub> . C<sub>12</sub> H<sub>12</sub> N<sub>2</sub> O . C<sub>8</sub> H<sub>4</sub> Cl<sub>2</sub> O<sub>2</sub> . C<sub>6</sub> H<sub>8</sub> N<sub>2</sub>)<sub>x</sub>

CI PMS

PCT Polyamide, Polyamide formed, Polyether

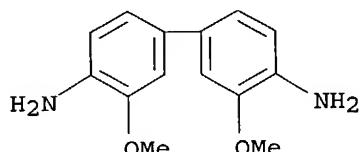
SR CA

LC STN Files: CA, CAPLUS

CM 1

CRN 119-90-4

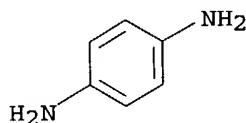
CMF C<sub>14</sub> H<sub>16</sub> N<sub>2</sub> O<sub>2</sub>



CM 2

CRN 106-50-3

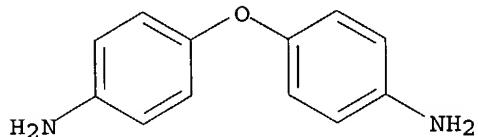
CMF C<sub>6</sub> H<sub>8</sub> N<sub>2</sub>



CM 3

CRN 101-80-4

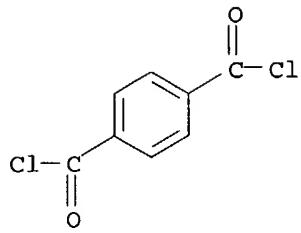
CMF C<sub>12</sub> H<sub>12</sub> N<sub>2</sub> O



CM 4

CRN 100-20-9

CMF C<sub>8</sub> H<sub>4</sub> Cl<sub>2</sub> O<sub>2</sub>



2 REFERENCES IN FILE CA (1957 TO DATE)  
 2 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L21 ANSWER 3 OF 10 REGISTRY COPYRIGHT 2003 ACS

RN 157609-05-7 REGISTRY

CN 1,3-Isobenzofurandione, 3a,4,5,7a-tetrahydro-7-methyl-5-(tetrahydro-2,5-dioxo-3-furanyl)-, polymer with 3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diamine (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-, polymer with 3a,4,5,7a-tetrahydro-7-methyl-5-(tetrahydro-2,5-dioxo-3-furanyl)-1,3-isobenzofurandione (9CI)

OTHER NAMES:

CN o-Dianisidine-5-(2,5-dioxotetrahydro-3-furanyl)-3-methyl-3-cyclohexene-1,2-dicarboxylic acid dianhydride copolymer

MF (C14 H16 N2 O2 . C13 H12 O6)x

CI PMS

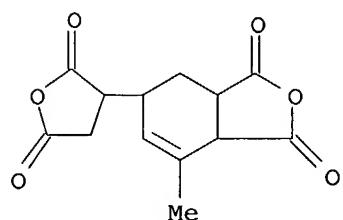
PCT Polyamic acid, Polyamic acid formed, Polyimide, Polyimide formed

SR CA

LC STN Files: CA, CAPLUS

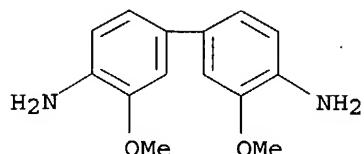
CM 1

CRN 73003-90-4  
 CMF C13 H12 O6



CM 2

CRN 119-90-4  
 CMF C14 H16 N2 O2



1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L21 ANSWER 4 OF 10 REGISTRY COPYRIGHT 2003 ACS

RN 130424-76-9 REGISTRY

CN [4,5'-Biisobenzofuran]-1,1',3,3'-tetrone, polymer with  
3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diamine (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-, polymer with  
[4,5'-biisobenzofuran]-1,1',3,3'-tetrone (9CI)

OTHER NAMES:

CN 2,3,3',4'-Biphenyltetracarboxylic acid dianhydride-o-dianisidine  
copolymer

MF (C<sub>16</sub> H<sub>6</sub> O<sub>6</sub> . C<sub>14</sub> H<sub>16</sub> N<sub>2</sub> O<sub>2</sub>)<sub>x</sub>

CI PMS

PCT Polyamic acid, Polyamic acid formed, Polyimide, Polyimide formed

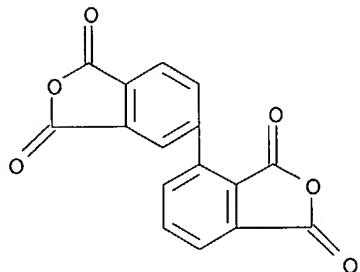
SR CA

LC STN Files: CA, CAPLUS

CM 1

CRN 36978-41-3

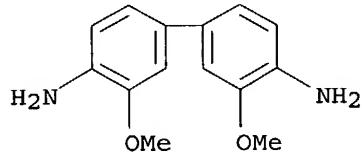
CMF C<sub>16</sub> H<sub>6</sub> O<sub>6</sub>



CM 2

CRN 119-90-4

CMF C<sub>14</sub> H<sub>16</sub> N<sub>2</sub> O<sub>2</sub>



1 REFERENCES IN FILE CA (1957 TO DATE)

1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L21 ANSWER 5 OF 10 REGISTRY COPYRIGHT 2003 ACS

RN 114824-60-1 REGISTRY

CN Benzoic acid, 3,5-diamino-, polymer with 4,4'-(9,10-anthracenediyl)bis[benzenamine], [5,5'-biisobenzofuran]-1,1',3,3'-tetrone, 3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diamine, 2,6-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide, 2,8-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide, 4,6-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide, 4,4'-methylenebis[2-methylbenzenamine] and 4,4'-oxybis[benzenamine] (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 3,7-Dibenzothiophenediamine, 2,6-dimethyl-, 5,5-dioxide, polymer with 4,4'-(9,10-anthracenediyl)bis[benzenamine], [5,5'-biisobenzofuran]-1,1',3,3'-tetrone, 3,5-diaminobenzoic acid, 3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diamine, 2,8-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide, 4,6-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide, 4,4'-methylenebis[2-methylbenzenamine] and 4,4'-oxybis[benzenamine] (9CI)

CN 3,7-Dibenzothiophenediamine, 2,8-dimethyl-, 5,5-dioxide, polymer with 4,4'-(9,10-anthracenediyl)bis[benzenamine], [5,5'-biisobenzofuran]-1,1',3,3'-tetrone, 3,5-diaminobenzoic acid, 3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diamine, 2,6-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide, 4,6-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide, 4,4'-methylenebis[2-methylbenzenamine] and 4,4'-oxybis[benzenamine] (9CI)

CN 3,7-Dibenzothiophenediamine, 4,6-dimethyl-, 5,5-dioxide, polymer with 4,4'-(9,10-anthracenediyl)bis[benzenamine], [5,5'-biisobenzofuran]-1,1',3,3'-tetrone, 3,5-diaminobenzoic acid, 3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diamine, 2,6-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide, 2,8-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide, 4,4'-methylenebis[2-methylbenzenamine] and 4,4'-oxybis[benzenamine] (9CI)

CN Benzenamine, 4,4'-(9,10-anthracenediyl)bis-, polymer with [5,5'-biisobenzofuran]-1,1',3,3'-tetrone, 3,5-diaminobenzoic acid, 3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diamine, 2,6-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide, 2,8-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide, 4,6-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide, 4,4'-methylenebis[2-methylbenzenamine] and 4,4'-oxybis[benzenamine] (9CI)

CN Benzenamine, 4,4'-methylenebis[2-methyl-, polymer with 4,4'-(9,10-anthracenediyl)bis[benzenamine], [5,5'-biisobenzofuran]-1,1',3,3'-tetrone, 3,5-diaminobenzoic acid, 3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diamine, 2,6-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide, 2,8-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide and 4,4'-oxybis[benzenamine] (9CI)

CN Benzenamine, 4,4'-oxybis-, polymer with 4,4'-(9,10-anthracenediyl)bis[benzenamine], [5,5'-biisobenzofuran]-1,1',3,3'-tetrone, 3,5-diaminobenzoic acid, 3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diamine, 2,6-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide, 2,8-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide, 4,6-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide and 4,4'-methylenebis[2-methylbenzenamine] (9CI)

CN [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-, polymer with 4,4'-(9,10-anthracenediyl)bis[benzenamine], [5,5'-biisobenzofuran]-1,1',3,3'-tetrone, 3,5-diaminobenzoic acid, 2,6-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide, 2,8-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide, 4,6-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide, 4,4'-methylenebis[2-methylbenzenamine] and 4,4'-oxybis[benzenamine] (9CI)

CN [5,5'-Biisobenzofuran]-1,1',3,3'-tetrone, polymer with 4,4'-(9,10-anthracenediyl)bis[benzenamine], 3,5-diaminobenzoic acid, 3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diamine, 2,6-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide, 2,8-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide, 4,6-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide, 4,4'-methylenebis[2-methylbenzenamine] and 4,4'-oxybis[benzenamine] (9CI)

OTHER NAMES:

CN 3,3',4,4'-Biphenyltetra carboxylic dianhydride-bis(4-amino-3-methylphenyl)methane-5,10-bis(4-aminophenyl)anthracene-3,5-diaminobenzoic acid-3,7-diaminodimethylidiphenylenesulfone-4,4'-diaminodiphenyl ether-o-dianisidine copolymer

MF (C<sub>26</sub> H<sub>20</sub> N<sub>2</sub> . C<sub>16</sub> H<sub>6</sub> O<sub>6</sub> . C<sub>15</sub> H<sub>18</sub> N<sub>2</sub> . C<sub>14</sub> H<sub>16</sub> N<sub>2</sub> O<sub>2</sub> . C<sub>14</sub> H<sub>14</sub> N<sub>2</sub> O<sub>2</sub> S . C<sub>14</sub> H<sub>14</sub> N<sub>2</sub> O<sub>2</sub> S . C<sub>14</sub> H<sub>14</sub> N<sub>2</sub> O<sub>2</sub> S . C<sub>12</sub> H<sub>12</sub> N<sub>2</sub> O . C<sub>7</sub> H<sub>8</sub> N<sub>2</sub> O<sub>2</sub>)<sub>x</sub>

CI PMS

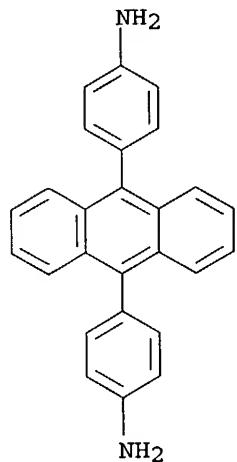
PCT Polyamic acid, Polyamic acid formed, Polyamide, Polyamide formed, Polyether, Polyimide, Polyimide formed, Polysulfone

SR CA

LC STN Files: CA, CAPLUS

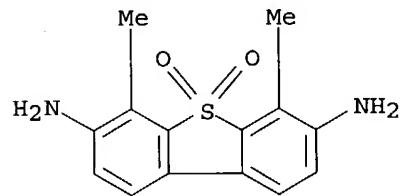
CM 1

CRN 106704-35-2  
CMF C26 H20 N2



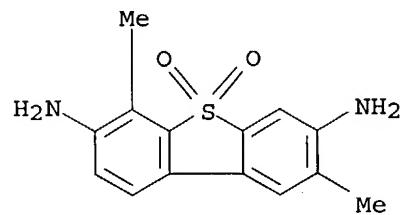
CM 2

CRN 105524-04-7  
CMF C14 H14 N2 O2 S



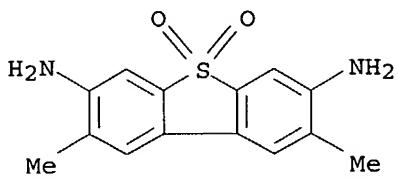
CM 3

CRN 105524-03-6  
CMF C14 H14 N2 O2 S



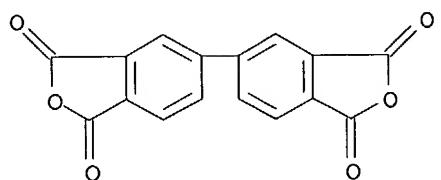
CM 4

CRN 55011-44-4  
CMF C14 H14 N2 O2 S



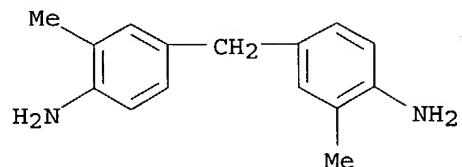
CM 5

CRN 2420-87-3  
CMF C16 H16 O6



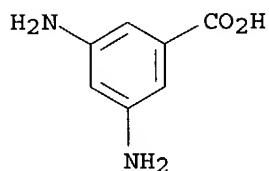
CM 6

CRN 838-88-0  
CMF C15 H18 N2



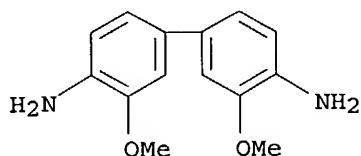
CM 7

CRN 535-87-5  
CMF C7 H8 N2 O2



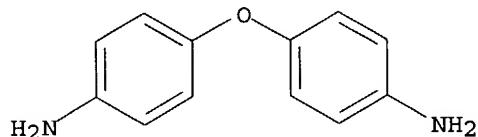
CM 8

CRN 119-90-4  
CMF C14 H16 N2 O2



CM 9

CRN 101-80-4  
CMF C12 H12 N2 O



1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L21 ANSWER 6 OF 10 REGISTRY COPYRIGHT 2003 ACS

RN 114803-36-0 REGISTRY

CN [5,5'-Biisobenzofuran]-1,1',3,3'-tetrone, polymer with 4,4'-(9,10-anthracenediyl)bis[benzenamine], 3,5-diaminobenzoic acid, 3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diamine, 2,6-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide, 2,8-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide, 4,6-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide, 4,4'-methylenebis[benzenamine], 4,4'-methylenebis[2-methylbenzenamine], 4,4'-oxybis[benzenamine], 2,6-pyridinediamine, 4,4'-sulfonylbis[benzenamine] and 4,4'-[sulfonylbis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 2,6-Pyridinediamine, polymer contg. (9CI)  
CN 3,7-Dibenzothiophenediamine, 2,6-dimethyl-, 5,5-dioxide, polymer contg. (9CI)

CN 3,7-Dibenzothiophenediamine, 2,8-dimethyl-, 5,5-dioxide, polymer contg. (9CI)

CN 3,7-Dibenzothiophenediamine, 4,6-dimethyl-, 5,5-dioxide, polymer contg. (9CI)

CN Benzenamine, 4,4'-(9,10-anthracenediyl)bis-, polymer contg. (9CI)

CN Benzenamine, 4,4'-methylenebis-, polymer contg. (9CI)

CN Benzenamine, 4,4'-methylenebis[2-methyl-, polymer contg. (9CI)

CN Benzenamine, 4,4'-oxybis-, polymer contg. (9CI)

CN Benzenamine, 4,4'-sulfonylbis-, polymer contg. (9CI)

CN Benzenamine, 4,4'-[sulfonylbis(4,1-phenyleneoxy)]bis-, polymer contg. (9CI)

CN Benzoic acid, 3,5-diamino-, polymer contg. (9CI)

CN [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-, polymer contg. (9CI)

OTHER NAMES:

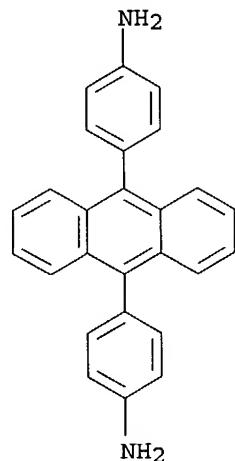
CN 3,3',4,4'-Biphenyltetracarboxylic dianhydride-bis(4-amino-3-methylphenyl)methane-4,4'-bis(4-aminophenoxy)diphenylsulfone-5,10-bis(4-aminophenyl)anthracene-3,5-diaminobenzoic acid-3,7-diaminodimethylidiphenylenesulfone-4,4'-diaminodiphenyl ether-4,4'-diaminodiphenylmethane-4,4'-diaminodiphenylsulfone-2,6-diaminopyridine-o-dianisidine copolymer

MF (C26 H20 N2 . C24 H20 N2 O4 S . C16 H6 O6 . C15 H18 N2 . C14 H16 N2 O2 . C14 H14 N2 O2 S . C14 H14 N2 O2 S . C14 H14 N2 O2 S . C13 H14 N2 . C12 H12 N2 O2 S . C12 H12 N2 O . C7 H8 N2 O2 . C5 H7 N3)x

CI PMS  
PCT Polyamic acid, Polyamic acid formed, Polyamide, Polyamide formed,  
Polyether, Polyimide, Polyimide formed, Polysulfone  
SR CA  
LC STN Files: CA, CAPLUS

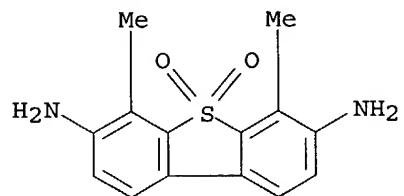
CM 1

CRN 106704-35-2  
CMF C26 H20 N2



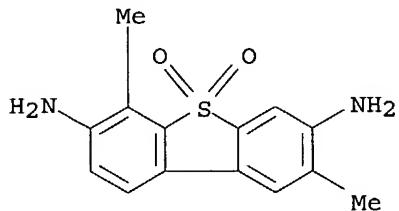
CM 2

CRN 105524-04-7  
CMF C14 H14 N2 O2 S



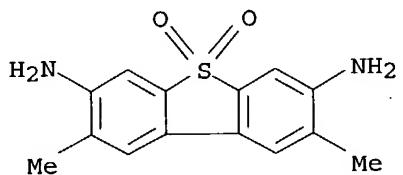
CM 3

CRN 105524-03-6  
CMF C14 H14 N2 O2 S



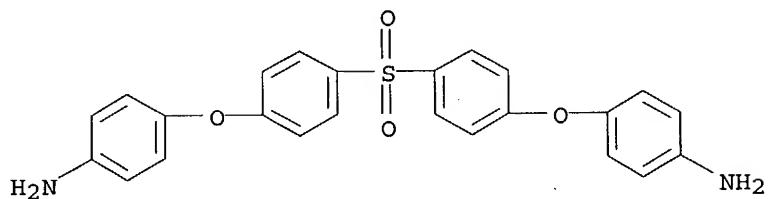
CM 4

CRN 55011-44-4  
CMF C14 H14 N2 O2 S



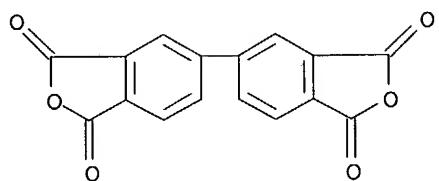
CM 5

CRN 13080-89-2  
CMF C24 H20 N2 O4 S



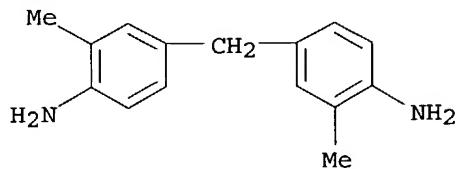
CM 6

CRN 2420-87-3  
CMF C16 H6 O6



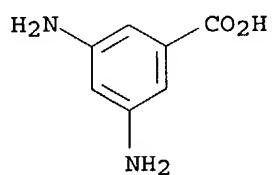
CM 7

CRN 838-88-0  
CMF C15 H18 N2



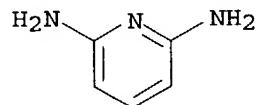
CM 8

CRN 535-87-5  
CMF C7 H8 N2 O2



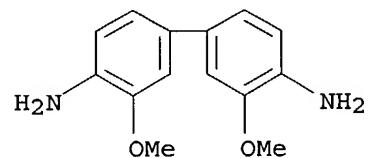
CM 9

CRN 141-86-6  
CMF C5 H7 N3



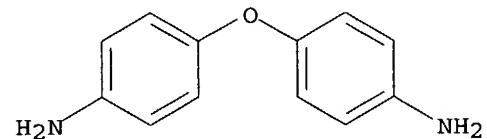
CM 10

CRN 119-90-4  
CMF C14 H16 N2 O2



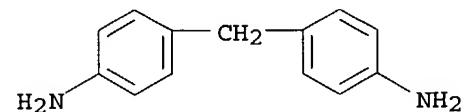
CM 11

CRN 101-80-4  
CMF C12 H12 N2 O



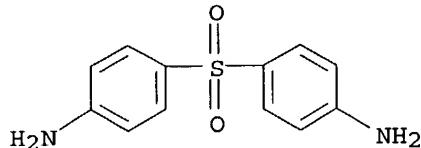
CM 12

CRN 101-77-9  
CMF C13 H14 N2



CM 13

CRN 80-08-0  
CMF C12 H12 N2 O2 S



1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L21 ANSWER 7 OF 10 REGISTRY COPYRIGHT 2003 ACS

RN 77238-79-0 REGISTRY

CN [5,5'-Biisobenzofuran]-1,1',3,3'-tetrone, polymer with  
3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diamine and 4,4'-oxybis[benzenamine]  
(9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Benzenamine, 4,4'-oxybis-, polymer with [5,5'-biisobenzofuran]-1,1',3,3'-  
tetrone and 3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diamine (9CI)

CN [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-, polymer with  
[5,5'-biisobenzofuran]-1,1',3,3'-tetrone and 4,4'-oxybis[benzenamine]  
(9CI)

OTHER NAMES:

CN 3,3',4,4'-Biphenyltetracarboxylic acid dianhydride-4,4'-  
diaminodiphenyl ether-3,3'-dimethoxybenzidine copolymer

CN 3,3',4,4'-Biphenyltetracarboxylic dianhydride-4,4'-diaminodiphenyl  
ether-o-dianisidine copolymer

MF (C16 H6 O6 . C14 H16 N2 O2 . C12 H12 N2 O)x

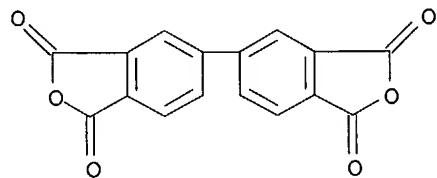
CI PMS

PCT Polyamic acid, Polyamic acid formed, Polyether, Polyimide, Polyimide  
formed

LC STN Files: CA, CAPLUS

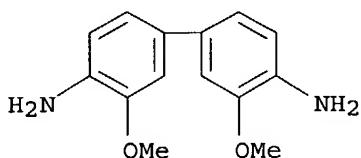
CM 1

CRN 2420-87-3  
CMF C16 H6 O6



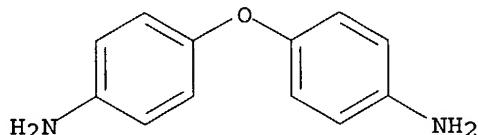
CM 2

CRN 119-90-4  
CMF C14 H16 N2 O2



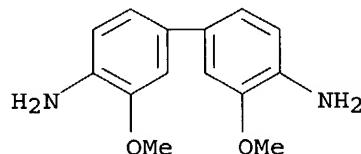
CM 3

CRN 101-80-4  
CMF C12 H12 N2 O



2 REFERENCES IN FILE CA (1957 TO DATE)  
2 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L21 ANSWER 8 OF 10 REGISTRY COPYRIGHT 2003 ACS  
RN 53632-08-9 REGISTRY  
CN [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-, conjugate diacid (9CI) (CA INDEX NAME)  
OTHER NAMES:  
CN o-Dianisidine conjugate diacid  
MF C14 H16 N2 O2 . 2 H  
LC STN Files: CA, CAPLUS  
CRN (119-90-4)

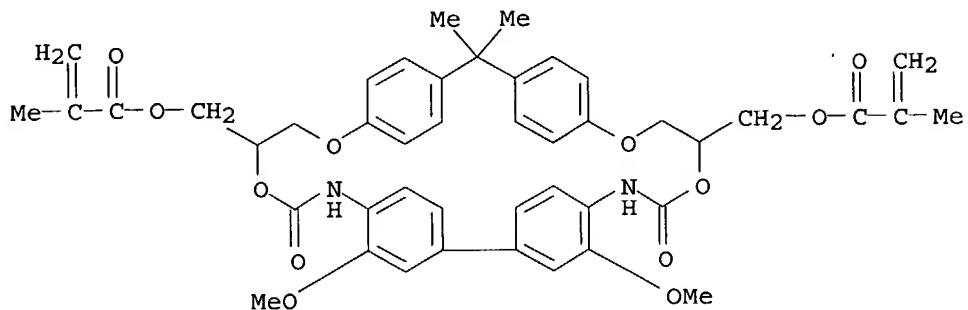


●2 H<sup>+</sup>

3 REFERENCES IN FILE CA (1957 TO DATE)  
3 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L21 ANSWER 9 OF 10 REGISTRY COPYRIGHT 2003 ACS  
RN 34921-95-4 REGISTRY  
CN 2-Propenoic acid, 2-methyl-, (4,28-dimethoxy-16,16-dimethyl-7,25-dioxo-8,11,21,24-tetraoxa-6,26-diazapentacyclo[25.2.2.22,5.212,15.217,20]heptatriaconta-2,4,12,14,17,19,27,29,30,32,34,36-dodecaene-9,23-diyl)bis(methylene) ester (9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN 8,11,21,24-Tetraoxa-6,26-diazapentacyclo[25.2.2.22,5.212,15.217,20]heptatriacontane, 2-propenoic acid deriv.  
OTHER NAMES:  
CN 2,2-Propane bis[3-(4-phenoxy)-1,2-hydroxypropane-1-methacrylate]  
adduct with dianisidine diisocyanate  
MF C45 H48 N2 O12

LC STN Files: CA, CAPLUS



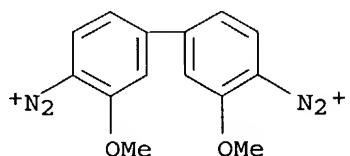
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

=> s dianisidine  
L22 41 DIANISIDINE

=> d 41

L22 ANSWER 41 OF 41 REGISTRY COPYRIGHT 2003 ACS  
RN 91-91-8 REGISTRY  
CN [1,1'-Biphenyl]-4,4'-bis(diazonium), 3,3'-dimethoxy-, dichloride (9CI)  
(CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN 4,4'-Biphenylbis(diazonium), 3,3'-dimethoxy-, dichloride (8CI)  
CN 4,4'-Bi[2-methoxybenzenediazonium chloride] (6CI, 7CI)  
OTHER NAMES:  
CN Blue BNS salt  
CN Diazo Blue B  
CN o-Dianisidinetetraazonium chloride  
DR 90145-79-2  
MF C14 H12 N4 O2 . 2 Cl  
CI COM  
LC STN Files: AGRICOLA, BEILSTEIN\*, BIOBUSINESS, BIOSIS, CA, CAOLD, CAPLUS,  
CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CSCHEM, IFICDB, IFIPAT,  
IFIUDB, TOXCENTER, USPATFULL  
(\*File contains numerically searchable property data)  
Other Sources: EINECS\*\*, NDSL\*\*, TSCA\*\*  
(\*\*Enter CHEMLIST File for up-to-date regulatory information)  
CRN (20282-70-6)

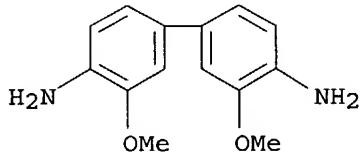


● 2 Cl<sup>-</sup>

27 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
27 REFERENCES IN FILE CAPLUS (1957 TO DATE)  
2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> d 40

L22 ANSWER 40 OF 41 REGISTRY COPYRIGHT 2003 ACS  
RN 119-90-4 REGISTRY  
CN [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy- (9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN Benzidine, 3,3'-dimethoxy- (8CI)  
CN Fast Blue B Base (6CI)  
OTHER NAMES:  
CN 3,3'-Dimethoxy-4,4'-diaminodiphenyl  
CN 3,3'-Dimethoxybenzidine  
CN 3,3'-Dimethoxybenzidine  
CN 4,4'-Bi-o-anisidine  
CN 4,4'-Diamino-3,3'-dimethoxy-1,1'-biphenyl  
CN Amacel Developed Navy SD  
CN Azogene Fast Blue B  
CN Blue Base Irga B  
CN Blue Base NB  
CN Blue BN Base  
CN C.I. Disperse Black 6  
CN Cellitazol B  
CN Cibacete Diazo Navy Blue 2B  
CN Diacel Navy DC  
CN Dianisidine  
CN Fast Blue Base B  
CN Fast Blue DSC Base  
CN Hiltonil Fast Blue B Base  
CN Kayaku Blue B Base  
CN Lake Blue B Base  
CN Mitsui Blue B Base  
CN Naphthalil Blue B Base  
CN o-Dianisidine  
CN Setacyl Diazo Navy R  
FS 3D CONCORD  
DR 59777-10-5  
MF C14 H16 N2 O2  
CI COM  
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS,  
BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CHEMCATS,  
CHEMINFORMRX, CHEMLIST, CHEMSAFE, CIN, CSCHEM, CSNB, DDFU, DRUGU,  
EMBASE, GMELIN\*, HODOC\*, HSDB\*, IFICDB, IFIPAT, IFIUDB, MEDLINE, MRCK\*,  
MSDS-OHS, NIOSHTIC, PIRA, PROMT, RTECS\*, SPECINFO, TOXCENTER, ULIDAT,  
USPAT2, USPATFULL  
(\*File contains numerically searchable property data)  
Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*  
(\*\*Enter CHEMLIST File for up-to-date regulatory information)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1519 REFERENCES IN FILE CA (1957 TO DATE)  
35 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
1519 REFERENCES IN FILE CAPLUS (1957 TO DATE)  
18 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> d ti 1-39  
'TI' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'

The following are valid formats:

Substance information can be displayed by requesting individual fields or predefined formats. The predefined substance formats are: (RN = CAS Registry Number)

|        |   |
|--------|---|
| REG    | - RN  |
| SAM    | - Index Name, MF, and structure - no RN                 |
| FIDE   | - All substance data, except sequence data              |
| IDE    | - FIDE, but only 50 names                               |
| SQIDE  | - IDE, plus sequence data                               |
| SQIDE3 | - Same as SQIDE, but 3-letter amino acid codes are used |
| SQD    | - Protein sequence data, includes RN                    |
| SQD3   | - Same as SQD, but 3-letter amino acid codes are used   |
| SQN    | - Protein sequence name information, includes RN        |
| CALC   | - Table of calculated properties                        |
| EPROP  | - Table of experimental properties                      |
| PROP   | - EPROP and CALC  |

Any CA File format may be combined with any substance format to obtain CA references citing the substance. The substance formats must be cited first. The CA File predefined formats are:

|       |  |
|-------|--|
| ABS   | -- Abstract  |
| APPS  | -- Application and Priority Information                      |
| BIB   | -- CA Accession Number, plus Bibliographic Data              |
| CAN   | -- CA Accession Number                                       |
| CBIB  | -- CA Accession Number, plus Bibliographic Data (compressed) |
| IND   | -- Index Data  |
| IPC   | -- International Patent Classification                       |
| PATS  | -- PI, SO  |
| STD   | -- BIB, IPC, and NCL   |
| IABS  | -- ABS, indented, with text labels                           |
| IBIB  | -- BIB, indented, with text labels                           |
| ISTD  | -- STD format, indented                                      |
| OBIB  | ----- AN, plus Bibliographic Data (original)                 |
| OIBIB | ----- OBIB, indented with text labels                        |
| SBIB  | ----- BIB, no citations                                      |
| SIBIB | ----- IBIB, no citations                                     |

The ALL format gives FIDE BIB ABS IND RE, plus sequence data when it is available.

The MAX format is the same as ALL.

The IALL format is the same as ALL with BIB ABS and IND indented, with text labels.

For additional information, please consult the following help messages:

HELP DFIELDS -- To see a complete list of individual display fields.  
HELP FORMATS -- To see detailed descriptions of the predefined formats.  
ENTER DISPLAY FORMAT (IDE):end

=> d 1-39

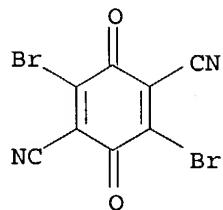
L22 ANSWER 1 OF 41 REGISTRY COPYRIGHT 2003 ACS  
RN 452338-77-1 REGISTRY  
CN Proantodianisidine (9CI) (CA INDEX NAME)  
MF Unspecified  
CI MAN  
SR CA  
LC STN Files: CA, CAPLUS, USPATFULL

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*  
1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L22 ANSWER 2 OF 41 REGISTRY COPYRIGHT 2003 ACS  
RN 252882-12-5 REGISTRY  
CN 1,4-Cyclohexadiene-1,4-dicarbonitrile, 2,5-dibromo-3,6-dioxo-, compd. with dichloromethane and 3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diamine (10:7:10) (9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-, compd. with 2,5-dibromo-3,6-dioxo-1,4-cyclohexadiene-1,4-dicarbonitrile and dichloromethane (10:10:7) (9CI)  
OTHER NAMES:  
CN o-Dianisidine-2,5-dibromo-3,6-dicyano-1,4-benzoquinone charge-transfer complex  
MF C14 H16 N2 O2 . C8 Br2 N2 O2 . 7/10 C H2 Cl2  
SR CA  
LC STN Files: CA, CAPLUS

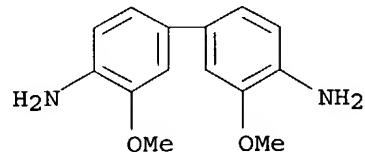
CM 1

CRN 4655-72-5  
CMF C8 Br2 N2 O2



CM 2

CRN 119-90-4  
CMF C14 H16 N2 O2



CM 3

CRN 75-09-2  
CMF C H2 Cl2

Cl—CH<sub>2</sub>—Cl

1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L22 ANSWER 3 OF 41 REGISTRY COPYRIGHT 2003 ACS

RN 252882-11-4 REGISTRY

CN 1,4-Cyclohexadiene-1,4-dicarbonitrile, 2,5-dichloro-3,6-dioxo-, compd. with benzene and 3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diamine (20:7:20) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-, compd. with benzene and 2,5-dichloro-3,6-dioxo-1,4-cyclohexadiene-1,4-dicarbonitrile (20:7:20) (9CI)

OTHER NAMES:

CN o-Dianisidine-2,5-dichloro-3,6-dicyano-1,4-benzoquinone charge-transfer complex

MF C14 H16 N2 O2 . C8 Cl2 N2 O2 . 7/20 C6 H6

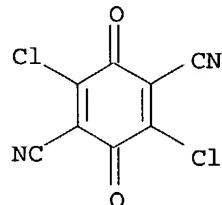
SR CA

LC STN Files: CA, CAPLUS

CM 1

CRN 4655-79-2

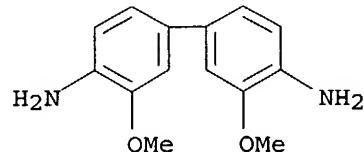
CMF C8 Cl2 N2 O2



CM 2

CRN 119-90-4

CMF C14 H16 N2 O2



CM 3

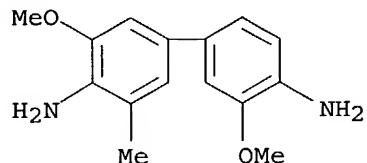
CRN 71-43-2

CMF C6 H6



1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L22 ANSWER 4 OF 41 REGISTRY COPYRIGHT 2003 ACS  
RN 238397-98-3 REGISTRY  
CN [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-5-methyl- (9CI) (CA INDEX NAME)  
OTHER NAMES:  
CN 5-Methyl-o-dianisidine  
FS 3D CONCORD  
MF C15 H18 N2 O2  
SR CA  
LC STN Files: CA, CAPLUS



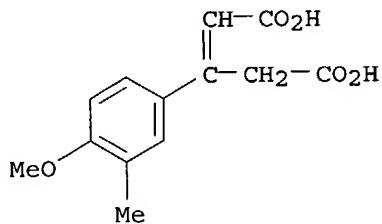
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L22 ANSWER 5 OF 41 REGISTRY COPYRIGHT 2003 ACS  
RN 204991-86-6 REGISTRY  
CN 2-Pentenedioic acid, 3-(4-methoxy-3-methylphenyl)-, polymer with  
3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diamine (9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-, polymer with  
3-(4-methoxy-3-methylphenyl)-2-pentenedioic acid (9CI)  
OTHER NAMES:  
CN o-Dianisidine-.beta.- (4-methoxy-3-methylphenyl)glutaconic acid  
copolymer  
MF (C14 H16 N2 O2 . C13 H14 O5)x  
CI PMS  
PCT Polyacrylic, Polyamide, Polyamide formed, Polystyrene, Polyvinyl  
SR CA  
LC STN Files: CA, CAPLUS

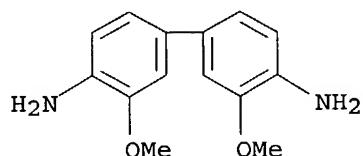
CM 1

CRN 67141-89-3  
CMF C13 H14 O5



CM 2

CRN 119-90-4  
CMF C14 H16 N2 O2



1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L22 ANSWER 6 OF 41 REGISTRY COPYRIGHT 2003 ACS

RN 190328-20-2 REGISTRY

CN 1,4-Benzeneddicarbonyl dichloride, polymer with 1,4-benzenediamine,  
3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diamine and 4,4'-oxybis[benzenamine]  
(9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 1,4-Benzenediamine, polymer with 1,4-benzeneddicarbonyl dichloride,  
3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diamine and 4,4'-oxybis[benzenamine]  
(9CI)

CN Benzenamine, 4,4'-oxybis-, polymer with 1,4-benzenediamine,  
1,4-benzeneddicarbonyl dichloride and 3,3'-dimethoxy[1,1'-biphenyl]-4,4'-  
diamine (9CI)

CN [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-, polymer with  
1,4-benzenediamine, 1,4-benzeneddicarbonyl dichloride and  
4,4'-oxybis[benzenamine] (9CI)

OTHER NAMES:

CN 4,4'-Diaminodiphenyl ether-o-dianisidine-p-phenylenediamine-  
terephthalic acid chloride copolymer

MF (C14 H16 N2 O2 . C12 H12 N2 O . C8 H4 Cl2 O2 . C6 H8 N2)x

CI PMS

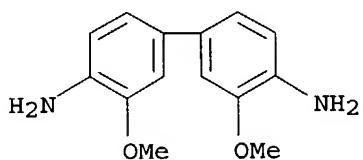
PCT Polyamide, Polyamide formed, Polyether

SR CA

LC STN Files: CA, CAPLUS

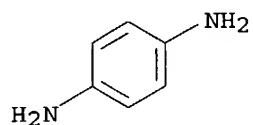
CM 1

CRN 119-90-4  
CMF C14 H16 N2 O2



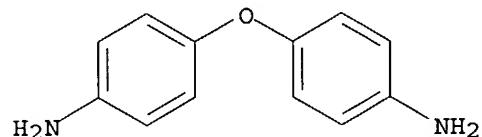
CM 2

CRN 106-50-3  
CMF C6 H8 N2



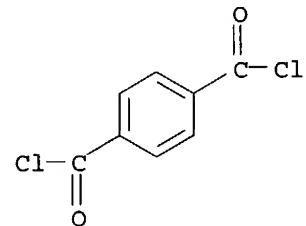
CM 3

CRN 101-80-4  
CMF C12 H12 N2 O



CM 4

CRN 100-20-9  
CMF C8 H4 Cl2 O2



2 REFERENCES IN FILE CA (1957 TO DATE)  
2 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L22 ANSWER 7 OF 41 REGISTRY COPYRIGHT 2003 ACS

RN 188347-25-3 REGISTRY

CN 1,4-Benzenedicarbonyl dichloride, 2-chloro-, polymer with 3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diamine and 3,3'-(1,3-phenylenebis(oxy))bis[benzenamine] (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Benzenamine, 3,3'-(1,3-phenylenebis(oxy))bis-, polymer with 2-chloro-1,4-benzenedicarbonyl dichloride and 3,3'-dimethoxy[1,1'-

biphenyl]-4,4'-diamine (9CI)  
CN [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-, polymer with  
2-chloro-1,4-benzenedicarbonyl dichloride and 3,3'-[1,3-  
phenylenebis(oxy)]bis[benzenamine] (9CI)

OTHER NAMES:

CN 1,3-Bis(3-aminophenoxy)benzene-2-chloroterephthaloyl  
chloride-o-dianisidine copolymer

MF (C<sub>18</sub> H<sub>16</sub> N<sub>2</sub> O<sub>2</sub> . C<sub>14</sub> H<sub>16</sub> N<sub>2</sub> O<sub>2</sub> . C<sub>8</sub> H<sub>3</sub> Cl<sub>3</sub> O<sub>2</sub>)<sub>x</sub>

CI PMS

PCT Polyamide, Polyamide formed, Polyether

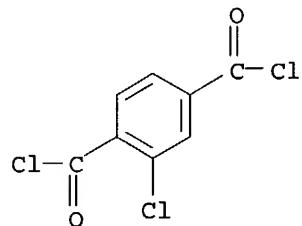
SR CA

LC STN Files: CA, CAPLUS

CM 1

CRN 13815-87-7

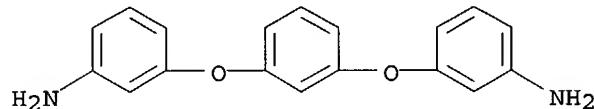
CMF C<sub>8</sub> H<sub>3</sub> Cl<sub>3</sub> O<sub>2</sub>



CM 2

CRN 10526-07-5

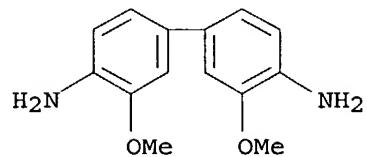
CMF C<sub>18</sub> H<sub>16</sub> N<sub>2</sub> O<sub>2</sub>



CM 3

CRN 119-90-4

CMF C<sub>14</sub> H<sub>16</sub> N<sub>2</sub> O<sub>2</sub>



1 REFERENCES IN FILE CA (1957 TO DATE)

1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L22 ANSWER 8 OF 41 REGISTRY COPYRIGHT 2003 ACS

RN 157609-05-7 REGISTRY

CN 1,3-Isobenzofuranone, 3a,4,5,7a-tetrahydro-7-methyl-5-(tetrahydro-2,5-dioxo-3-furanyl)-, polymer with 3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diamine (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-, polymer with  
3a,4,5,7a-tetrahydro-7-methyl-5-(tetrahydro-2,5-dioxo-3-furanyl)-1,3-  
isobenzofurandione (9CI)

OTHER NAMES:

CN o-Dianisidine-5-(2,5-dioxotetrahydro-3-furanyl)-3-methyl-3-  
cyclohexene-1,2-dicarboxylic acid dianhydride copolymer

MF (C14 H16 N2 O2 . C13 H12 O6)x

CI PMS

PCT Polyamic acid, Polyamic acid formed, Polyimide, Polyimide formed

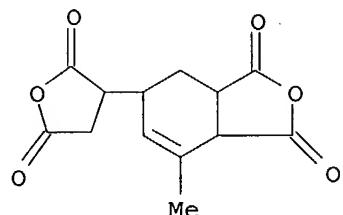
SR CA

LC STN Files: CA, CAPLUS

CM 1

CRN 73003-90-4

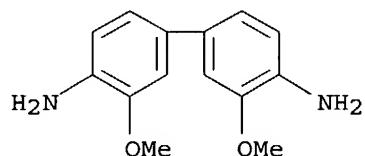
CMF C13 H12 O6



CM 2

CRN 119-90-4

CMF C14 H16 N2 O2



1 REFERENCES IN FILE CA (1957 TO DATE)

1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L22 ANSWER 9 OF 41 REGISTRY COPYRIGHT 2003 ACS

RN 130424-76-9 REGISTRY

CN [4,5'-Biisobenzofuran]-1,1',3,3'-tetrone, polymer with  
3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diamine (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-, polymer with  
[4,5'-biisobenzofuran]-1,1',3,3'-tetrone (9CI)

OTHER NAMES:

CN 2,3,3',4'-Biphenyltetracarboxylic acid dianhydride-o-dianisidine  
copolymer

MF (C16 H6 O6 . C14 H16 N2 O2)x

CI PMS

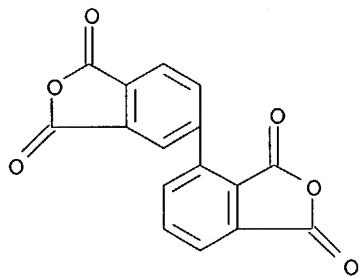
PCT Polyamic acid, Polyamic acid formed, Polyimide, Polyimide formed

SR CA

LC STN Files: CA, CAPLUS

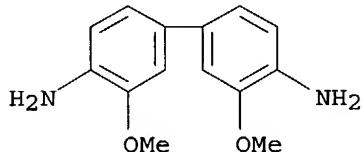
CM 1

CRN 36978-41-3  
CMF C16 H6 O6



CM 2

CRN 119-90-4  
CMF C14 H16 N2 O2



1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L22 ANSWER 10 OF 41 REGISTRY COPYRIGHT 2003 ACS

RN 114824-60-1 REGISTRY

CN Benzoic acid, 3,5-diamino-, polymer with 4,4'-(9,10-anthracenediyl)bis[benzenamine], [5,5'-biisobenzofuran]-1,1',3,3'-tetrone, 3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diamine, 2,6-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide, 2,8-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide, 4,6-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide, 4,4'-methylenebis[2-methylbenzenamine] and 4,4'-oxybis[benzenamine] (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 3,7-Dibenzothiophenediamine, 2,6-dimethyl-, 5,5-dioxide, polymer with 4,4'-(9,10-anthracenediyl)bis[benzenamine], [5,5'-biisobenzofuran]-1,1',3,3'-tetrone, 3,5-diaminobenzoic acid, 3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diamine, 2,8-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide, 4,6-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide, 4,4'-methylenebis[2-methylbenzenamine] and 4,4'-oxybis[benzenamine] (9CI)

CN 3,7-Dibenzothiophenediamine, 2,8-dimethyl-, 5,5-dioxide, polymer with 4,4'-(9,10-anthracenediyl)bis[benzenamine], [5,5'-biisobenzofuran]-1,1',3,3'-tetrone, 3,5-diaminobenzoic acid, 3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diamine, 2,6-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide, 4,6-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide, 4,4'-methylenebis[2-methylbenzenamine] and 4,4'-oxybis[benzenamine] (9CI)

CN 3,7-Dibenzothiophenediamine, 4,6-dimethyl-, 5,5-dioxide, polymer with 4,4'-(9,10-anthracenediyl)bis[benzenamine], [5,5'-biisobenzofuran]-1,1',3,3'-tetrone, 3,5-diaminobenzoic acid, 3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diamine, 2,6-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide, 2,8-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide, 4,4'-methylenebis[2-methylbenzenamine] and 4,4'-oxybis[benzenamine] (9CI)

CN Benzenamine, 4,4'-(9,10-anthracenediyl)bis-, polymer with [5,5'-biisobenzofuran]-1,1',3,3'-tetrone, 3,5-diaminobenzoic acid,

3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diamine, 2,6-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide, 2,8-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide, 4,6-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide, 4,4'-methylenebis[2-methylbenzenamine] and 4,4'-oxybis[benzenamine] (9CI)

CN Benzenamine, 4,4'-methylenebis[2-methyl-, polymer with 4,4'-(9,10-anthracenediyl)bis[benzenamine], [5,5'-biisobenzofuran]-1,1',3,3'-tetrone, 3,5-diaminobenzoic acid, 3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diamine, 2,6-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide, 2,8-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide, 4,6-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide and 4,4'-oxybis[benzenamine] (9CI)

CN Benzenamine, 4,4'-oxybis-, polymer with 4,4'-(9,10-anthracenediyl)bis[benzenamine], [5,5'-biisobenzofuran]-1,1',3,3'-tetrone, 3,5-diaminobenzoic acid, 3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diamine, 2,6-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide, 2,8-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide, 4,6-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide and 4,4'-methylenebis[2-methylbenzenamine] (9CI)

CN [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-, polymer with 4,4'-(9,10-anthracenediyl)bis[benzenamine], [5,5'-biisobenzofuran]-1,1',3,3'-tetrone, 3,5-diaminobenzoic acid, 2,6-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide, 2,8-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide, 4,6-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide, 4,4'-methylenebis[2-methylbenzenamine] and 4,4'-oxybis[benzenamine] (9CI)

CN [5,5'-Biisobenzofuran]-1,1',3,3'-tetrone, polymer with 4,4'-(9,10-anthracenediyl)bis[benzenamine], 3,5-diaminobenzoic acid, 3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diamine, 2,6-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide, 2,8-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide, 4,6-dimethyl-3,7-dibenzothiophenediamine 5,5-dioxide, 4,4'-methylenebis[2-methylbenzenamine] and 4,4'-oxybis[benzenamine] (9CI)

OTHER NAMES:

CN 3,3',4,4'-Biphenyltetracarboxylic dianhydride-bis(4-amino-3-methylphenyl)methane-5,10-bis(4-aminophenyl)anthracene-3,5-diaminobenzoic acid-3,7-diaminodimethyldiphenylenesulfone-4,4'-diaminodiphenyl ether-o-dianisidine copolymer

MF (C<sub>26</sub> H<sub>20</sub> N<sub>2</sub> . C<sub>16</sub> H<sub>6</sub> O<sub>6</sub> . C<sub>15</sub> H<sub>18</sub> N<sub>2</sub> . C<sub>14</sub> H<sub>16</sub> N<sub>2</sub> O<sub>2</sub> . C<sub>14</sub> H<sub>14</sub> N<sub>2</sub> O<sub>2</sub> S . C<sub>14</sub> H<sub>14</sub> N<sub>2</sub> O<sub>2</sub> S . C<sub>14</sub> H<sub>14</sub> N<sub>2</sub> O<sub>2</sub> S . C<sub>12</sub> H<sub>12</sub> N<sub>2</sub> O . C<sub>7</sub> H<sub>8</sub> N<sub>2</sub> O<sub>2</sub>)<sub>x</sub>

CI PMS

PCT Polyamic acid, Polyamic acid formed, Polyamide, Polyamide formed, Polyether, Polyimide, Polyimide formed, Polysulfone

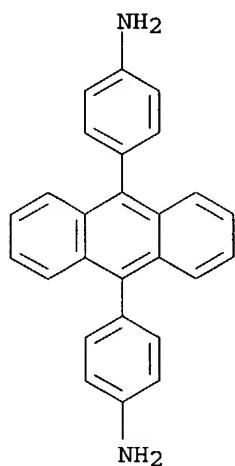
SR CA

LC STN Files: CA, CAPLUS

CM 1

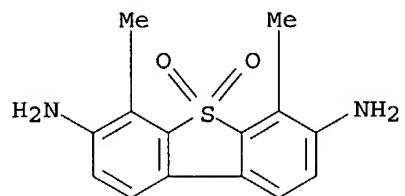
CRN 106704-35-2

CMF C<sub>26</sub> H<sub>20</sub> N<sub>2</sub>



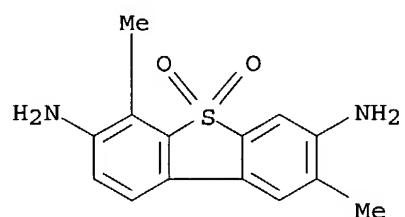
CM 2

CRN 105524-04-7  
CMF C14 H14 N2 O2 S



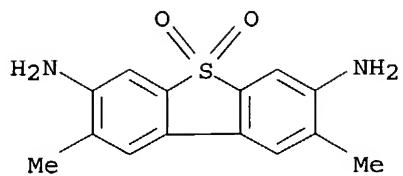
CM 3

CRN 105524-03-6  
CMF C14 H14 N2 O2 S



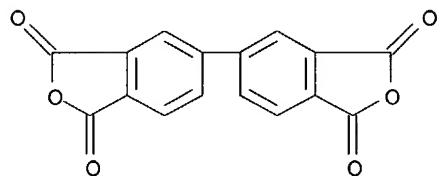
CM 4

CRN 55011-44-4  
CMF C14 H14 N2 O2 S



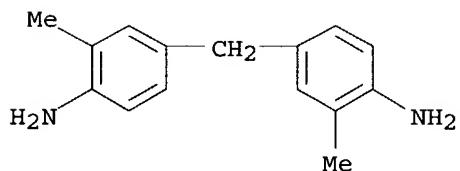
CM 5

CRN 2420-87-3  
CMF C16 H6 O6



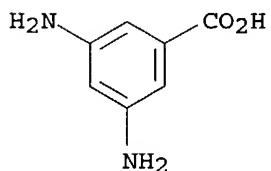
CM 6

CRN 838-88-0  
CMF C15 H18 N2



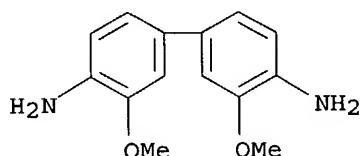
CM 7

CRN 535-87-5  
CMF C7 H8 N2 O2



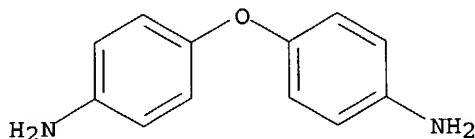
CM 8

CRN 119-90-4  
CMF C14 H16 N2 O2



CM 9

CRN 101-80-4  
CMF C12 H12 N2 O



1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

J-22 ANSWER 11 OF 41 REGISTRY COPYRIGHT 2003 ACS

BN 114803-36-0 REGISTRY

RN 114803-38-0 REGISTRY  
CN [5,5'-Biisobenzofuran]-1,1',3,3'-tetrone, polymer with  
4,4'-(9,10-anthracenediy1)bis[benzenamine], 3,5-diaminobenzoic acid,  
3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diamine, 2,6-dimethyl-3,7-  
dibenzothiophenediamine 5,5-dioxide, 2,8-dimethyl-3,7-  
dibenzothiophenediamine 5,5-dioxide, 4,6-dimethyl-3,7-  
dibenzothiophenediamine 5,5-dioxide, 4,4'-methylenebis[benzenamine],  
4,4'-methylenebis[2-methylbenzenamine], 4,4'-oxybis[benzenamine],  
2,6-pyridinediamine, 4,4'-sulfonylbis[benzenamine] and  
4,4'-[sulfonylbis(4,1-phenyleneoxy)]bis[benzenamine] (9CI) (CA INDEX  
NAME)

**OTHER CA INDEX NAMES:**

CN 2,6-Pyridinediamine, polymer contg. (9CI)

CN 3,7-Dibenzothiophenediamine, 2,6-dimethyl-, 5,5-dioxide, polymer contg. (9CI)

CN 3,7-Dibenzothiophenediamine, 2,8-dimethyl-, 5,5-dioxide, polymer contg. (9CI)

CN 3,7-Dibenzothiophenediamine, 4,6-dimethyl-, 5,5-dioxide, polymer (8CI)

CN Benzenamine, 4,4'-(9,10-anthracenediyl)bis-, polymer contg. (9,10-anthracenediyl)benzene (95%)

CN Benzenamine, 4,4'-methylenebis-, polymer contg.  
EU Benzenamine, 4,4'-methylenebis-[2-methyl- polymer

CN Benzenamine, 4,4'-methylenebis[2-methyl-, polymer contg. (8CI)  
CN Benzenamine, 4,4'-methylenbis[2-methyl-, polymer contg. (8CI)

CN Benzenamine, 4,4'-oxybis-, polymer contg. (9CI)  
CN Benzeneamine, 4,4'-sulfonylbis-, polymer contg. (9CI)

CN Benzenamine, 4,4'-sulfonylbis-, polymer contg. (9CI)  
CN Benzenamine, 4,4'-[sulfonylbis(4,1-phenyleneoxy)]bis-, polymer contg.

CN Benzoic acid, 3,5-diamino-, polymer contg. (9CI)  
3,5-diaminobenzoic acid, 3,5-diamino-, polymer contg. (9CI)

CN [1,1'-B

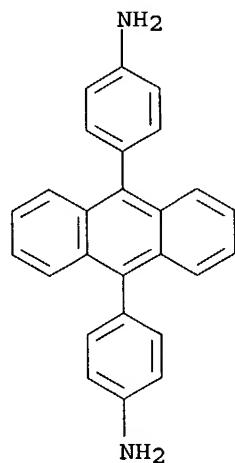
OTHER NAMES:  
CN 3,3',4,4'-Biphenyltetracarboxylic dianhydride-bis(4-amino-3-methylphenyl)methane-4,4'-bis(4-aminophenoxy)diphenylsulfone-5,10-bis(4-aminophenyl)anthracene-3,5-diaminobenzoic acid-3,7-diaminodimethylidiphenylenesulfone-4,4'-diaminodiphenyl ether-4,4'-diaminodiphenylmethane-4,4'-diaminodiphenylsulfone-2,6-diaminopyridine-o-dianisidine copolymer

MF (C26 H20 N2 . C24 H20 N2 O4 S . C16 H6 O6 . C15 H18 N2 . C14 H16 N2 O2 .  
 C14 H14 N2 O2 S . C14 H14 N2 O2 S . C14 H14 N2 O2 S . C13 H14 N2 . C12 H12  
 N2 O2 S . C12 H12 N2 O . C7 H8 N2 O2 . C5 H7 N3)x

CI PMS  
PCT Polyamic acid, Polyamic acid formed, Polyamide, Polyamide formed,  
Polyether, Polyimide, Polyimide formed, Polysulfone  
SR CA  
LC STN Files: CA, CAPLUS

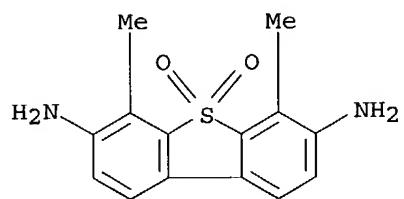
CM 1

CRN 106704-35-2  
CMF C26 H20 N2



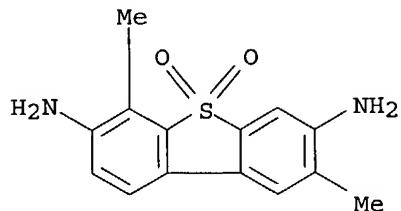
CM 2

CRN 105524-04-7  
CMF C14 H14 N2 O2 S



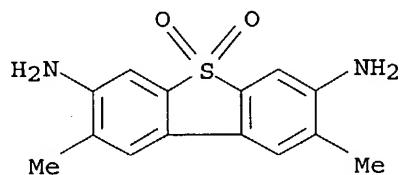
CM 3

CRN 105524-03-6  
CMF C14 H14 N2 O2 S



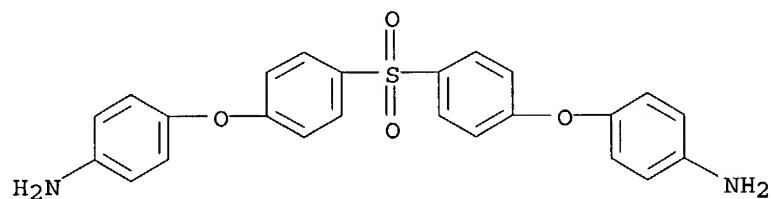
CM 4

CRN 55011-44-4  
CMF C14 H14 N2 O2 S



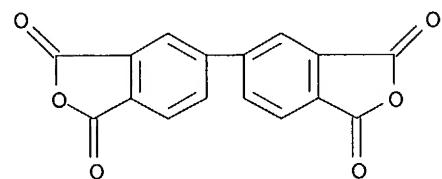
CM 5

CRN 13080-89-2  
CMF C24 H20 N2 O4 S



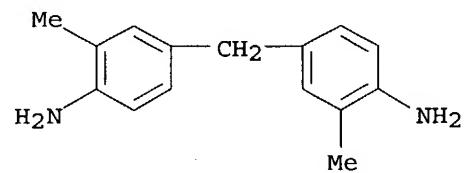
CM 6

CRN 2420-87-3  
CMF C16 H6 O6



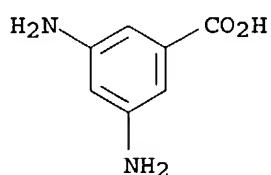
CM 7

CRN 838-88-0  
CMF C15 H18 N2



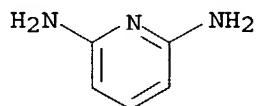
CM 8

CRN 535-87-5  
CMF C7 H8 N2 O2



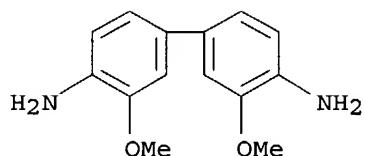
CM 9

CRN 141-86-6  
CMF C5 H7 N3



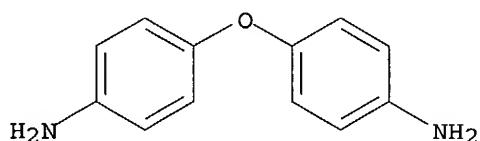
CM 10

CRN 119-90-4  
CMF C14 H16 N2 O2



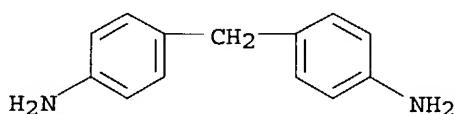
CM 11

CRN 101-80-4  
CMF C12 H12 N2 O



CM 12

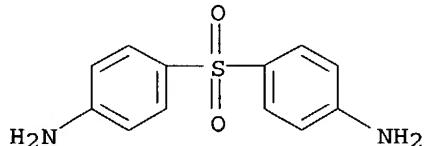
CRN 101-77-9  
CMF C13 H14 N2



CM 13

CRN 80-08-0

CMF C12 H12 N2 O2 S



1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L22 ANSWER 12 OF 41 REGISTRY COPYRIGHT 2003 ACS

RN 107852-34-6 REGISTRY

CN Dianisidine Blue 700-10S (9CI) (CA INDEX NAME)

MF Unspecified

CI MAN

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

1 REFERENCES IN FILE CA (1957 TO DATE)

1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L22 ANSWER 13 OF 41 REGISTRY COPYRIGHT 2003 ACS

RN 103490-26-2 REGISTRY

CN Poly[nitrilo(3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diyl)nitriloethylidyne(5-chloro-2-hydroxy-1,3-phenylene)methylene(5-chloro-2-hydroxy-1,3-phenylene)ethylidyne] (9CI) (CA INDEX NAME)

OTHER NAMES:

CN Dianisidine-3,3'-methylenebis(5-chloro-2-hydroxyacetophenone) copolymer, SRU

MF (C31 H26 Cl2 N2 O4)n

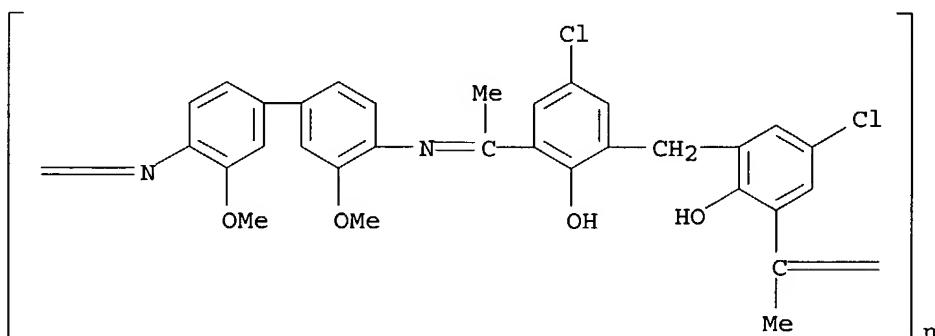
CI PMS

PCT Polyazomethine

SR CA

LC STN Files: CA, CAPLUS

\*\*RELATED POLYMERS AVAILABLE WITH POLYLINK\*\*



1 REFERENCES IN FILE CA (1957 TO DATE)

1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L22 ANSWER 14 OF 41 REGISTRY COPYRIGHT 2003 ACS

RN 103489-68-5 REGISTRY  
CN Ethanone, 1,1'-[methylenebis(5-chloro-2-hydroxy-3,1-phenylene)]bis-,  
polymer with 3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diamine (9CI) (CA INDEX  
NAME)

OTHER CA INDEX NAMES:

CN [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-, polymer with  
1,1'-(methylenebis(5-chloro-2-hydroxy-3,1-phenylene)]bis[ethanone] (9CI)

OTHER NAMES:

CN Dianisidine-3,3'-methylenebis(5-chloro-2-hydroxyacetophenone)  
copolymer

MF (C17 H14 Cl2 O4 . C14 H16 N2 O2)x

CI PMS

PCT Polyamine, Polyamine formed, Polyazomethine, Polyazomethine formed

SR CA

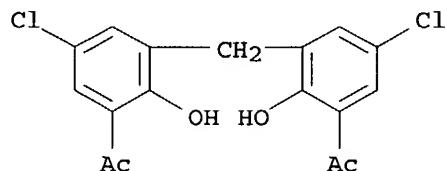
LC STN Files: CA, CAPLUS

\*\*RELATED POLYMERS AVAILABLE WITH POLYLINK\*\*

CM 1

CRN 60011-06-5

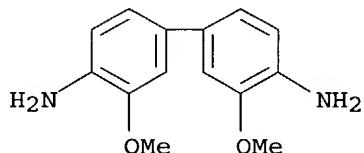
CMF C17 H14 Cl2 O4



CM 2

CRN 119-90-4

CMF C14 H16 N2 O2



1 REFERENCES IN FILE CA (1957 TO DATE)

1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L22 ANSWER 15 OF 41 REGISTRY COPYRIGHT 2003 ACS

RN 85876-21-7 REGISTRY

CN Peroxidase, dianisidine (9CI) (CA INDEX NAME)

OTHER NAMES:

CN Dianisidine peroxidase

CN o-Dianisidine peroxidase

MF Unspecified

CI MAN

LC STN Files: BIOSIS, CA, CAPLUS, TOXCENTER

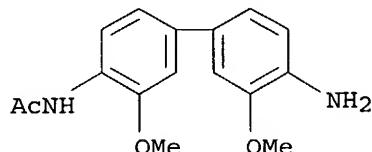
\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

5 REFERENCES IN FILE CA (1957 TO DATE)

5 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L22 ANSWER 16 OF 41 REGISTRY COPYRIGHT 2003 ACS

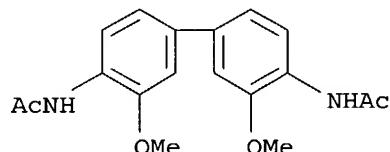
RN 83690-97-5 REGISTRY  
 CN Acetamide, N-(4'-amino-3,3'-dimethoxy[1,1'-biphenyl]-4-yl)- (9CI) (CA INDEX NAME)  
 OTHER NAMES:  
 CN N-Acetyl-o-dianisidine  
 FS 3D CONCORD  
 MF C16 H18 N2 O3  
 LC STN Files: BEILSTEIN\*, CA, CAPLUS, RTECS\*, TOXCENTER  
 (\*File contains numerically searchable property data)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

10 REFERENCES IN FILE CA (1957 TO DATE)  
 10 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L22 ANSWER 17 OF 41 REGISTRY COPYRIGHT 2003 ACS  
 RN 83310-76-3 REGISTRY  
 CN Acetamide, N,N'-(3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diyl)bis- (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN 4',4'''-Bi-o-acetanisidine (6CI)  
 OTHER NAMES:  
 CN N,N'-Diacetyl-o-dianisidine  
 FS 3D CONCORD  
 MF C18 H20 N2 O4  
 CI COM  
 LC STN Files: BEILSTEIN\*, CA, CAOLD, CAPLUS, CHEMCATS, RTECS\*, TOXCENTER  
 (\*File contains numerically searchable property data)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

14 REFERENCES IN FILE CA (1957 TO DATE)  
 14 REFERENCES IN FILE CAPLUS (1957 TO DATE)  
 1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L22 ANSWER 18 OF 41 REGISTRY COPYRIGHT 2003 ACS  
 RN 77272-92-5 REGISTRY  
 CN [5,5'-Biisobenzofuran]-1,1',3,3'-tetrone, polymer with  
 3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diamine (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-, polymer with  
 [5,5'-biisobenzofuran]-1,1',3,3'-tetrone (9CI)  
 OTHER NAMES:  
 CN 3,3',4,4'-Biphenyltetracarboxylic dianhydride-o-dianisidine  
 copolymer

MF (C<sub>16</sub> H<sub>6</sub> O<sub>6</sub> . C<sub>14</sub> H<sub>16</sub> N<sub>2</sub> O<sub>2</sub>)<sub>x</sub>

CI PMS

PCT Polyamic acid, Polyamic acid formed, Polyimide, Polyimide formed

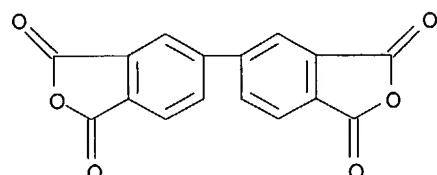
LC STN Files: CA, CAPLUS, USPATFULL

\*\*RELATED POLYMERS AVAILABLE WITH POLYLINK\*\*

CM 1

CRN 2420-87-3

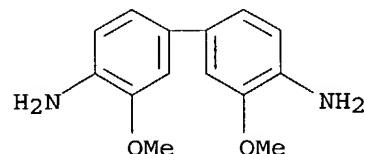
CMF C<sub>16</sub> H<sub>6</sub> O<sub>6</sub>



CM 2

CRN 119-90-4

CMF C<sub>14</sub> H<sub>16</sub> N<sub>2</sub> O<sub>2</sub>



9 REFERENCES IN FILE CA (1957 TO DATE)

9 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L22 ANSWER 19 OF 41 REGISTRY COPYRIGHT 2003 ACS

RN 77238-79-0 REGISTRY

CN [5,5'-Biisobenzofuran]-1,1',3,3'-tetrone, polymer with  
3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diamine and 4,4'-oxybis[benzenamine]  
(9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Benzenamine, 4,4'-oxybis-, polymer with [5,5'-biisobenzofuran]-1,1',3,3'-tetrone and 3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diamine (9CI)

CN [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-, polymer with  
[5,5'-biisobenzofuran]-1,1',3,3'-tetrone and 4,4'-oxybis[benzenamine]  
(9CI)

OTHER NAMES:

CN 3,3',4,4'-Biphenyltetra carboxylic acid dianhydride-4,4'-diaminodiphenyl  
ether-3,3'-dimethoxybenzidine copolymer

CN 3,3',4,4'-Biphenyltetra carboxylic dianhydride-4,4'-diaminodiphenyl  
ether-o-dianisidine copolymer

MF (C<sub>16</sub> H<sub>6</sub> O<sub>6</sub> . C<sub>14</sub> H<sub>16</sub> N<sub>2</sub> O<sub>2</sub> . C<sub>12</sub> H<sub>12</sub> N<sub>2</sub> O)<sub>x</sub>

CI PMS

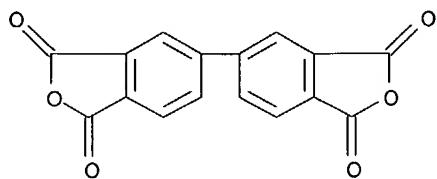
PCT Polyamic acid, Polyamic acid formed, Polyether, Polyimide, Polyimide  
formed

LC STN Files: CA, CAPLUS

CM 1

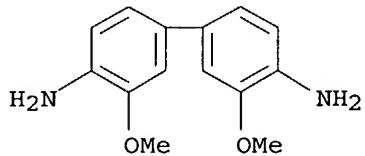
CRN 2420-87-3

CMF C<sub>16</sub> H<sub>6</sub> O<sub>6</sub>



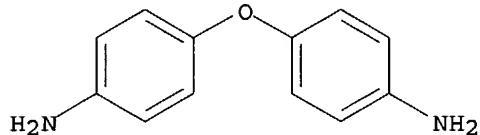
CM 2

CRN 119-90-4  
CMF C14 H16 N2 O2



CM 3

CRN 101-80-4  
CMF C12 H12 N2 O



2 REFERENCES IN FILE CA (1957 TO DATE)  
2 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L22 ANSWER 20 OF 41 REGISTRY COPYRIGHT 2003 ACS  
RN 72027-59-9 REGISTRY  
CN Dianisidine Orange 2915 (9CI) (CA INDEX NAME)  
MF Unspecified  
CI MAN  
LC STN Files: CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*  
1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L22 ANSWER 21 OF 41 REGISTRY COPYRIGHT 2003 ACS  
RN 65380-86-1 REGISTRY  
CN Poly[iminocarbonyl(dicarboxyphenylene)carbonylimino(3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diyl)] (9CI) (CA INDEX NAME)  
OTHER NAMES:  
CN 3,3'-Dimethoxy-4,4'-diaminobiphenyl-pyromellitic anhydride copolymer, sru  
CN o-Dianisidine-pyromellitic dianhydride copolymer, sru  
MF (C24 H18 N2 O8)n  
CI IDS, PMS, MAN  
PCT Manual registration  
LC STN Files: CA, CAPLUS

\*\*RELATED POLYMERS AVAILABLE WITH POLYLINK\*\*

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

3 REFERENCES IN FILE CA (1957 TO DATE)  
3 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L22 ANSWER 22 OF 41 REGISTRY COPYRIGHT 2003 ACS  
RN 60108-62-5 REGISTRY

CN [1,1'-Biphenyl]-4,4'-diamine, sulfate (1:1), mixt. with  
ar-methoxybenzenamine sulfate (2:1) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Benzenamine, ar-methoxy-, sulfate (2:1), mixt. contg. (9CI)  
OTHER NAMES:

CN Benzidine sulfate-dianisidine sulfate mixt.

MF C12 H12 N2 . C7 H9 N O . H2 O4 S . 1/2 H2 O4 S

CI MXS

LC STN Files: CA, CAPLUS, TOXCENTER

CM 1

CRN 60108-61-4

CMF C7 H9 N O . 1/2 H2 O4 S

CM 2

CRN 29191-52-4

CMF C7 H9 N O

CCI IDS



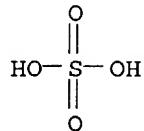
D1—NH<sub>2</sub>

D1—O—Me

CM 3

CRN 7664-93-9

CMF H2 O4 S



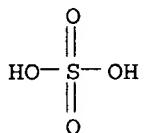
CM 4

CRN 531-86-2

CMF C12 H12 N2 . H2 O4 S

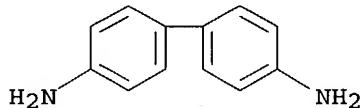
CM 5

CRN 7664-93-9  
CMF H<sub>2</sub> O<sub>4</sub> S



CM 6

CRN 92-87-5  
CMF C<sub>12</sub> H<sub>12</sub> N<sub>2</sub>



1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

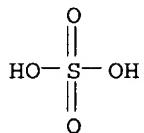
L22 ANSWER 23 OF 41 REGISTRY COPYRIGHT 2003 ACS  
RN 56436-30-7 REGISTRY  
CN [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-, sulfate (9CI) (CA INDEX NAME)

OTHER NAMES:

CN Dianisidine sulfate  
MF C<sub>14</sub> H<sub>16</sub> N<sub>2</sub> O<sub>2</sub> . x H<sub>2</sub> O<sub>4</sub> S  
LC STN Files: BEILSTEIN\*, BIOSIS, CA, CAPLUS, NIOSHTIC, TOXCENTER  
(\*File contains numerically searchable property data)

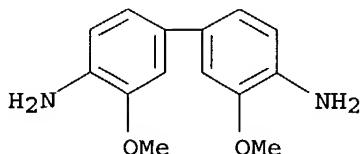
CM 1

CRN 7664-93-9  
CMF H<sub>2</sub> O<sub>4</sub> S



CM 2

CRN 119-90-4  
CMF C<sub>14</sub> H<sub>16</sub> N<sub>2</sub> O<sub>2</sub>



3 REFERENCES IN FILE CA (1957 TO DATE)  
3 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L22 ANSWER 24 OF 41 REGISTRY COPYRIGHT 2003 ACS  
RN 56332-48-0 REGISTRY  
CN Benzenamine, ar,ar,ar,ar-tetraazido-ar-methoxy- (9CI) (CA INDEX NAME)  
OTHER NAMES:  
CN Tetraazodianisidine  
MF C7 H5 N13 O  
CI IDS  
LC STN Files: CA, CAPLUS



D1—O—Me

D1—NH<sub>2</sub>

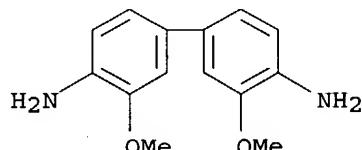
4 [ D1—N<sub>3</sub> ]

1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L22 ANSWER 25 OF 41 REGISTRY COPYRIGHT 2003 ACS  
RN 55120-86-0 REGISTRY  
CN 1,4-Benzeneddicarbonyl dichloride, polymer with 1,4-benzenediamine and  
3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diamine (9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN 1,4-Benzenediamine, polymer with 1,3-benzeneddicarbonyl dichloride and  
3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diamine (9CI)  
CN [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-, polymer with  
1,4-benzenediamine and 1,4-benzeneddicarbonyl dichloride (9CI)  
OTHER NAMES:  
CN o-Dianisidine-p-phenylenediamine-terephthaloyl dichloride  
copolymer  
MF (C<sub>14</sub> H<sub>16</sub> N<sub>2</sub> O<sub>2</sub> . C<sub>8</sub> H<sub>4</sub> Cl<sub>2</sub> O<sub>2</sub> . C<sub>6</sub> H<sub>8</sub> N<sub>2</sub>)<sub>x</sub>  
CI PMS  
PCT Polyamide, Polyamide formed  
LC STN Files: CA, CAPLUS, IFICDB, IFIPAT, IFIUDB

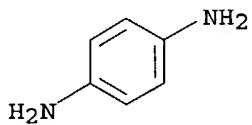
CM 1

CRN 119-90-4  
CMF C<sub>14</sub> H<sub>16</sub> N<sub>2</sub> O<sub>2</sub>



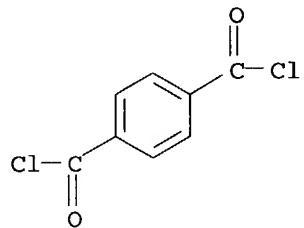
CM 2

CRN 106-50-3  
CMF C6 H8 N2



CM 3

CRN 100-20-9  
CMF C8 H4 Cl2 O2



5 REFERENCES IN FILE CA (1957 TO DATE)  
5 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L22 ANSWER 26 OF 41 REGISTRY COPYRIGHT 2003 ACS

RN 53632-08-9 REGISTRY

CN [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-, conjugate diacid (9CI) (CA INDEX NAME)

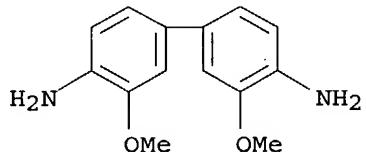
OTHER NAMES:

CN o-Dianisidine conjugate diacid

MF C14 H16 N2 O2 . 2 H

LC STN Files: CA, CAPLUS

CRN (119-90-4)



●2 H<sup>+</sup>

3 REFERENCES IN FILE CA (1957 TO DATE)  
3 REFERENCES IN FILE CAPLUS (1957 TO DATE)

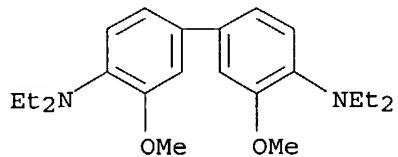
L22 ANSWER 27 OF 41 REGISTRY COPYRIGHT 2003 ACS

RN 41261-11-4 REGISTRY

CN [1,1'-Biphenyl]-4,4'-diamine, N,N,N',N'-tetraethyl-3,3'-dimethoxy- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN N,N,N',N'-Tetraethyl-o-dianisidine  
FS 3D CONCORD  
MF C22 H32 N2 O2  
LC STN Files: CA, CAPLUS



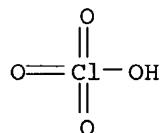
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L22 ANSWER 28 OF 41 REGISTRY COPYRIGHT 2003 ACS  
RN 38758-68-8 REGISTRY  
CN [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-, perchlorate (9CI) (CA INDEX NAME)  
OTHER NAMES:  
CN o-Dianisidine perchlorate  
MF C14 H16 N2 O2 . x Cl H O4  
LC STN Files: CA, CAPLUS

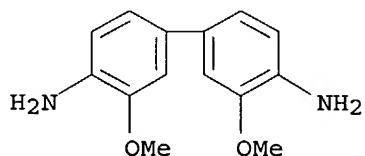
CM 1

CRN 7601-90-3  
CMF Cl H O4



CM 2

CRN 119-90-4  
CMF C14 H16 N2 O2



1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L22 ANSWER 29 OF 41 REGISTRY COPYRIGHT 2003 ACS  
RN 34921-95-4 REGISTRY  
CN 2-Propenoic acid, 2-methyl-, (4,28-dimethoxy-16,16-dimethyl-7,25-dioxo-8,11,21,24-tetraoxa-6,26-diazapentacyclo[25.2.2.22,5.212,15.217,20]heptatricaconta-2,4,12,14,17,19,27,29,30,32,34,36-dodecaene-9,23-

diyl)bis(methylene) ester (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

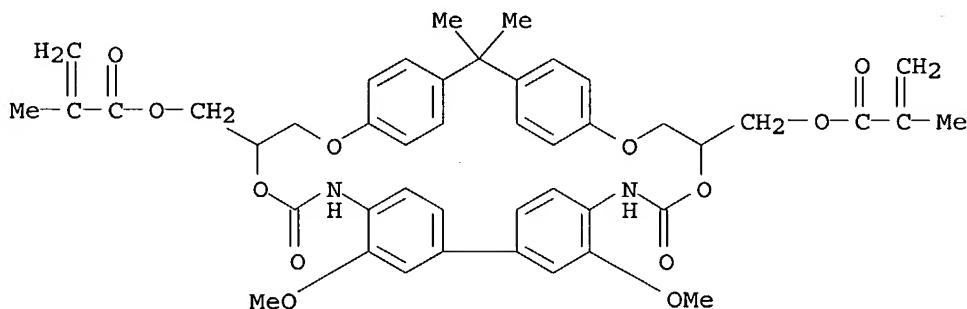
CN 8,11,21,24-Tetraoxa-6,26-diazapentacyclo[25.2.2.22,5.212,15.217,20]heptatriciacontane, 2-propenoic acid deriv.

OTHER NAMES:

CN 2,2-Propane bis[3-(4-phenoxy)-1,2-hydroxypropane-1-methacrylate]  
adduct with dianisidine diisocyanate

MF C45 H48 N2 O12

LC STN Files: CA, CAPLUS



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1957 TO DATE)

1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L22 ANSWER 30 OF 41 REGISTRY COPYRIGHT 2003 ACS

RN 33700-03-7 REGISTRY

CN Copper, bis(3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diamine-N)bis(thiocyanato-S)- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Copper, bis(3,3'-dimethoxybenzidine)bis(thiocyanato)- (8CI)

CN [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-, copper complex

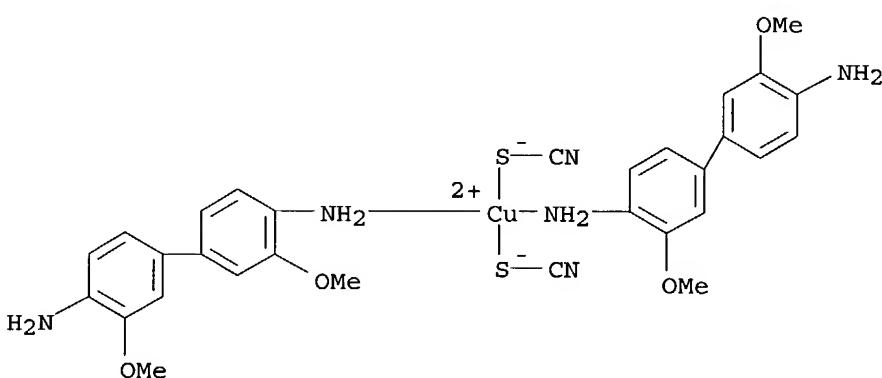
OTHER NAMES:

CN Copper, bis(o-dianisidine)bis(thiocyanato)-

MF C30 H32 Cu N6 O4 S2

CI CCS

LC STN Files: CA, CAPLUS



2 REFERENCES IN FILE CA (1957 TO DATE)

2 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L22 ANSWER 31 OF 41 REGISTRY COPYRIGHT 2003 ACS

RN 32357-89-4 REGISTRY

CN 4',4''-Bi-o-benzanisidine (8CI) (CA INDEX NAME)

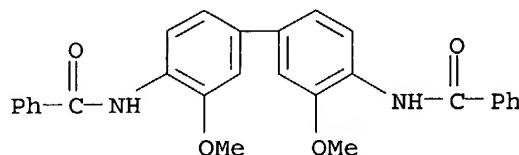
OTHER NAMES:

CN N,N'-Dibenzoyl-o-dianisidine

FS 3D CONCORD

MF C28 H24 N2 O4

LC STN Files: BEILSTEIN\*, CA, CAPLUS, CHEMCATS  
(\*File contains numerically searchable property data)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1957 TO DATE)

1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L22 ANSWER 32 OF 41 REGISTRY COPYRIGHT 2003 ACS

RN 30284-41-4 REGISTRY

CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with  
3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diamine (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 1,2,4,5-Benzenetetracarboxylic 1,2:4,5-dianhydride, polymer with  
3,3'-dimethoxybenzidine (8CI)

CN [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-, polymer with  
1H,3H-benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone (9CI)

OTHER NAMES:

CN 1,2,4,5-Benzenetetracarboxylic dianhydride-4,4'-diamino-3,3'-  
dimethoxybiphenyl copolymer

CN 3,3'-Dimethoxy-4,4'-diaminobiphenyl-pyromellitic dianhydride copolymer

CN 3,3'-Dimethoxybenzidine-pyromellitic dianhydride copolymer

CN 4,4'-Diamino-3,3'-dimethoxybiphenyl-pyromellitic dianhydride copolymer

CN o-Dianisidine-pyromellitic dianhydride copolymer

MF (C14 H16 N2 O2 . C10 H2 O6)x

CI PMS

PCT Polyamic acid, Polyamic acid formed, Polyimide, Polyimide formed

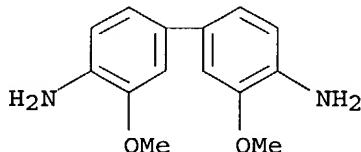
LC STN Files: CA, CAPLUS

\*\*RELATED POLYMERS AVAILABLE WITH POLYLINK\*\*

CM 1

CRN 119-90-4

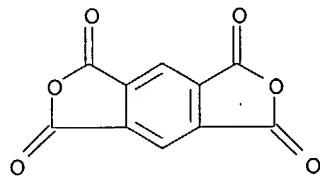
CMF C14 H16 N2 O2



CM 2

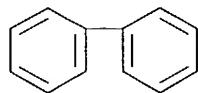
CRN 89-32-7

CMF C10 H2 O6



18 REFERENCES IN FILE CA (1957 TO DATE)  
 18 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L22 ANSWER 33 OF 41 REGISTRY COPYRIGHT 2003 ACS  
 RN 25619-70-9 REGISTRY  
 CN 1,1'-Biphenyl, ar,ar'-diisocyanato-ar,ar'-dimethoxy- (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN Isocyanic acid, ar,ar'-dimethoxybiphenylene ester (7CI, 8CI)  
 OTHER NAMES:  
 CN Dianisidine diisocyanate  
 MF C16 H12 N2 O4  
 CI IDS, COM  
 LC STN Files: CA, CAOLD, CAPLUS, CSCHEM, IFICDB, IFIPAT, IFIUDB, USPATFULL

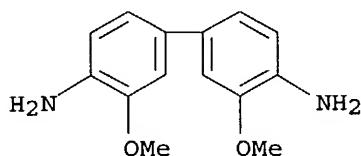


2 ( D1—O—Me )

2 ( D1—NCO )

19 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 19 REFERENCES IN FILE CAPLUS (1957 TO DATE)  
 4 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L22 ANSWER 34 OF 41 REGISTRY COPYRIGHT 2003 ACS  
 RN 20325-40-0 REGISTRY  
 CN [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-, dihydrochloride (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN Benzidine, 3,3'-dimethoxy-, dihydrochloride (8CI)  
 OTHER NAMES:  
 CN 3,3'-Dimethoxybenzidine dihydrochloride  
 CN C.I. Disperse Black 6 dihydrochloride  
 CN o-Dianisidine dihydrochloride  
 MF C14 H16 N2 O2 . 2 Cl H  
 CI COM  
 LC STN Files: BEILSTEIN\*, BIOSIS, CA, CAPLUS, CHEMCATS, CHEMLIST, CIN,  
 CSCHEM, HSDB\*, IFICDB, IFIPAT, IFIUDB, MSDS-OHS, NIOSHTIC, RTECS\*,  
 SPECINFO, TOXCENTER, USPATFULL  
 (\*File contains numerically searchable property data)  
 Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*  
 (\*\*Enter CHEMLIST File for up-to-date regulatory information)  
 CRN (119-90-4)



●2 HCl

46 REFERENCES IN FILE CA (1957 TO DATE)  
46 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L22 ANSWER 35 OF 41 REGISTRY COPYRIGHT 2003 ACS

RN 17681-65-1 REGISTRY

CN 2-Naphthalenol, 1,1'-(3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diyl)bis(azo)bis- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 2-Naphthol, 1,1'-(3,3'-dimethoxy-4,4'-biphenylylene)bis(azo)di- (8CI)

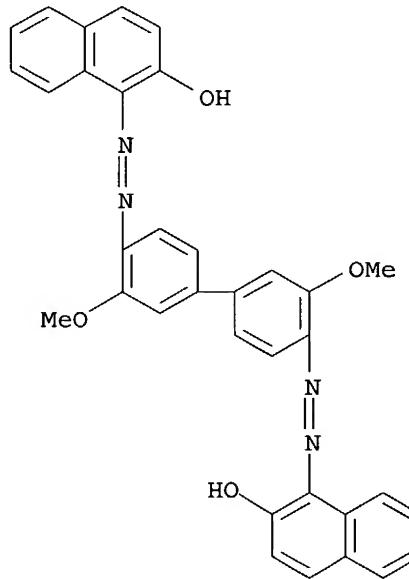
OTHER NAMES:

CN Dianisidine Blue B

FS 3D CONCORD

MF C34 H26 N4 O4

LC STN Files: BEILSTEIN\*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL  
(\*File contains numerically searchable property data)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

3 REFERENCES IN FILE CA (1957 TO DATE)

1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

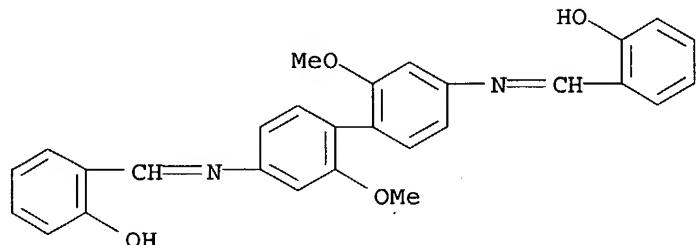
3 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L22 ANSWER 36 OF 41 REGISTRY COPYRIGHT 2003 ACS

RN 13463-15-5 REGISTRY

CN o-Cresol, .alpha.,.alpha.'-(2,2'-dimethoxy-4,4'-

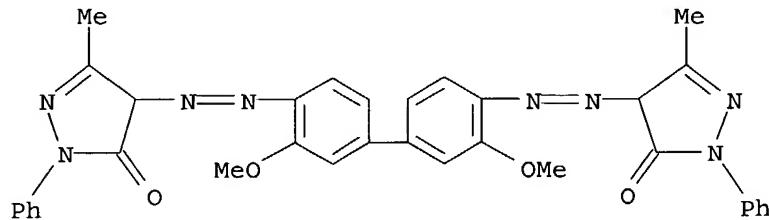
biphenylene)dinitrilo]di- (8CI) (CA INDEX NAME)  
OTHER NAMES:  
CN Dianisidine, disalicylidene-  
FS 3D CONCORD  
MF C28 H24 N2 O4  
LC STN Files: BEILSTEIN\*, CA, CAPLUS  
(\*File contains numerically searchable property data)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

2 REFERENCES IN FILE CA (1957 TO DATE)  
2 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L22 ANSWER 37 OF 41 REGISTRY COPYRIGHT 2003 ACS  
RN 6505-29-9 REGISTRY  
CN 3H-Pyrazol-3-one, 4,4'-[{(3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[2,4-dihydro-5-methyl-2-phenyl- (9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN 2-Pyrazolin-5-one, 4,4'-(3,3'-dimethoxy-4,4'-biphenylenebisazo)bis[3-methyl-1-phenyl- (6CI)  
CN C.I. Pigment Red 41 (8CI)  
OTHER NAMES:  
CN Bis(1-phenyl-3-methyl-5-oxo-4-pyrazolinyl)-4,4'-disazo-3,3'-dimethoxybiphenyl  
CN C.I. 21200  
CN Dianisidine Red  
CN Electra red  
CN Electra Red  
CN Electra Red (Yellowish) R-128  
CN Pigment Red BB  
CN Resamine Fast Red BB  
CN Rubber Fast Red BBE  
CN Vulcan Fast Red BBE  
FS 3D CONCORD  
DR 105375-28-8, 74415-32-0  
MF C34 H30 N8 O4  
LC STN Files: CA, CAOLD, CAPLUS, CHEMLIST, IFICDB, IFIPAT, IFIUDB,  
SPECINFO, USPATFULL  
Other Sources: EINECS\*\*, NDSL\*\*, TSCA\*\*  
(\*\*Enter CHEMLIST File for up-to-date regulatory information)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

29 REFERENCES IN FILE CA (1957 TO DATE)  
 2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 29 REFERENCES IN FILE CAPLUS (1957 TO DATE)  
 2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L22 ANSWER 38 OF 41 REGISTRY COPYRIGHT 2003 ACS

RN 6505-28-8 REGISTRY

CN Butanamide, 2,2'-(3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diyl)bis(azo)bis[3-oxo-N-phenyl-] (9CI) (CA INDEX NAME)

OTHER NAMES:

CN C.I. 21160

CN C.I. Pigment Orange 16

CN Dainichi Fast Orange GR

CN Diane Orange Y 25

CN Dianisidine Orange 10406

CN Florida orange

CN Isol Benzidine Orange GX

CN Isol Benzidine Orange R

CN Madras Toner X 1843

CN Pigment Orange 16

CN Pigment Orange 3A

CN Pigment Orange 3AY

CN Sanyo Fast Orange R

CN Seikafast Orange 2900

CN Symuler Fast Orange K

CN Symuler Fast Orange V

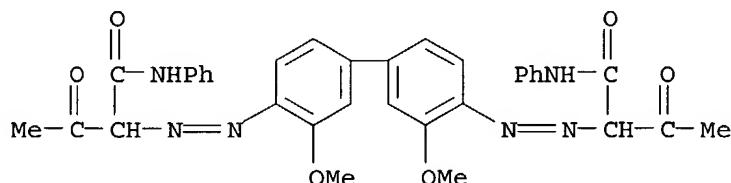
FS 3D CONCORD

MF C34 H32 N6 O6

LC STN Files: BIOBUSINESS, CA, CAPLUS, CHEMLIST, CIN, CSCHEM, IFICDB, IFIPAT, IFIUDB, MSDS-OHS, PROMT, TOXCENTER, USPATFULL

Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*

(\*\*Enter CHEMLIST File for up-to-date regulatory information)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

56 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 56 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L22 ANSWER 39 OF 41 REGISTRY COPYRIGHT 2003 ACS  
RN 5437-88-7 REGISTRY

CN 2-Naphthalenecarboxamide, 4,4'-(3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diyl)bis(azo)bis[3-hydroxy-N-(2-methoxyphenyl)- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN C.I. Pigment Blue 26 (7CI, 8CI)

OTHER NAMES:

CN C.I. 21185

CN Chromophyl Blue B-70

CN Dianisidine blue

DR 76412-94-7

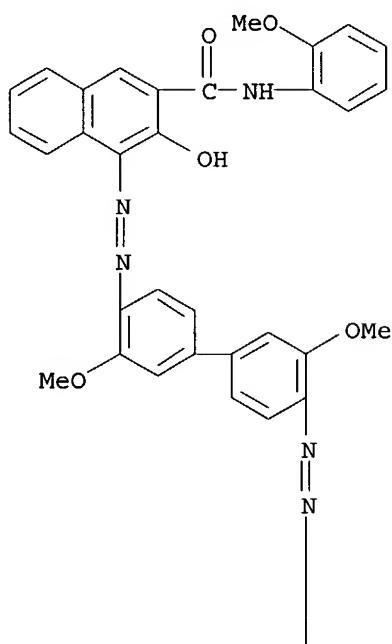
MF C50 H40 N6 O8

LC STN Files: CA, CAOLD, CAPLUS, CHEMLIST, IFICDB, IFIPAT, IFIUDB,  
USPATFULL

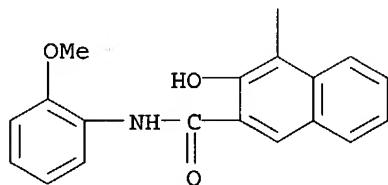
Other Sources: EINECS\*\*, NDSL\*\*, TSCA\*\*

(\*\*Enter CHEMLIST File for up-to-date regulatory information)

PAGE 1-A



PAGE 2-A



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

16 REFERENCES IN FILE CA (1957 TO DATE)

1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

16 REFERENCES IN FILE CAPLUS (1957 TO DATE)

1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> s n carboxymethyl and glycine  
4635400 N  
53063 CARBOXYMETHYL  
16145 N CARBOXYMETHYL  
(N(W) CARBOXYMETHYL)  
414547 GLYCINE  
L23 7351 N CARBOXYMETHYL AND GLYCINE

=> s l23 and phenyl  
8880747 PHENYL  
L24 2193 L23 AND PHENYL

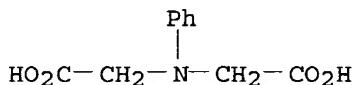
=> s n carboxymethyl and phenyl glycine  
4635400 N  
53063 CARBOXYMETHYL  
16145 N CARBOXYMETHYL  
(N(W) CARBOXYMETHYL)  
8880747 PHENYL  
414547 GLYCINE  
1109 PHENYL GLYCINE  
(PHENYL(W) GLYCINE)  
L25 28 N CARBOXYMETHYL AND PHENYL GLYCINE

=> d 1-28

L25 ANSWER 1 OF 28 REGISTRY COPYRIGHT 2003 ACS  
RN 318506-30-8 REGISTRY  
CN Glycine, N-(carboxymethyl)-N-phenyl-, compd. with guanidine (1:2)  
(9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN Guanidine, compd. with N-(carboxymethyl)-N-phenylglycine (2:1)  
(9CI)  
MF C10 H11 N O4 . 2 C H5 N3  
SR CA  
LC STN Files: CA, CAPLUS

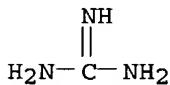
CM 1

CRN 1137-73-1  
CMF C10 H11 N O4



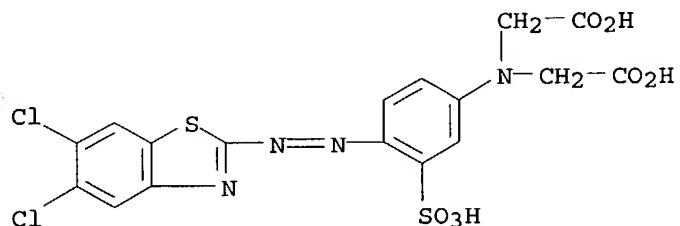
CM 2

CRN 113-00-8  
CMF C H5 N3



1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L25 ANSWER 2 OF 28 REGISTRY COPYRIGHT 2003 ACS  
 RN 207506-15-8 REGISTRY  
 CN Glycine, N-(carboxymethyl)-N-[4-[(5,6-dichloro-2-benzothiazolyl)azo]-3-sulfophenyl]-(9CI) (CA INDEX NAME)  
 OTHER NAMES:  
 CN 2-[2-(5,6-Dichlorobenzothiazolyl)azo]-5-[(N,N-dicarboxymethyl)amino]benzenesulfonic acid  
 CN N-(Carboxymethyl)-N-[4-[(5,6-dichloro-2-benzothiazolyl)azo]-3-sulfophenyl]glycine  
 FS 3D CONCORD  
 MF C17 H12 Cl2 N4 O7 S2  
 SR CA  
 LC STN Files: CA, CAPLUS



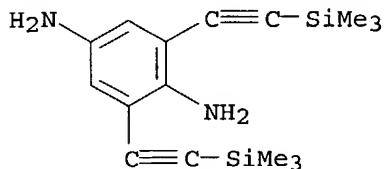
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

3 REFERENCES IN FILE CA (1957 TO DATE)  
 3 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L25 ANSWER 3 OF 28 REGISTRY COPYRIGHT 2003 ACS  
 RN 156075-02-4 REGISTRY  
 CN Glycine, N-(carboxymethyl)-N-[4-[(4-nitrophenyl)azo]phenyl]-, polymer with 2,6-bis[(trimethylsilyl)ethynyl]-1,4-benzenediamine (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN 1,4-Benzenediamine, 2,6-bis[(trimethylsilyl)ethynyl]-, polymer with N-(carboxymethyl)-N-[4-[(4-nitrophenyl)azo]phenyl]glycine (9CI)  
 MF (C16 H24 N2 Si2 . C16 H14 N4 O6)x  
 CI PMS  
 PCT Polyacetylene, Polyamide, Polyamide formed, Polyamine  
 SR CA  
 LC STN Files: CA, CAPLUS, TOXCENTER

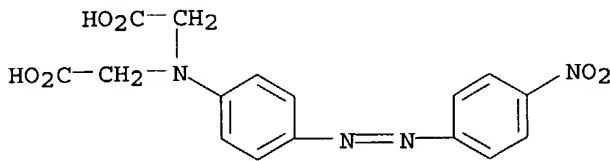
CM 1

CRN 156075-01-3  
 CMF C16 H24 N2 Si2



CM 2

CRN 141209-18-9  
 CMF C16 H14 N4 O6



1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L25 ANSWER 4 OF 28 REGISTRY COPYRIGHT 2003 ACS

RN 156075-00-2 REGISTRY

CN Glycine, N-(carboxymethyl)-N-[4-[(4-nitrophenyl)azo]phenyl]-, polymer with 2,6-di-1-hexynyl-1,4-benzenediamine (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 1,4-Benzenediamine, 2,6-di-1-hexynyl-, polymer with N-(carboxymethyl)-N-[4-[(4-nitrophenyl)azo]phenyl]glycine (9CI)

MF (C18 H24 N2 . C16 H14 N4 O6)x

CI PMS

PCT Polyacetylene, Polyamide, Polyamide formed, Polyamine

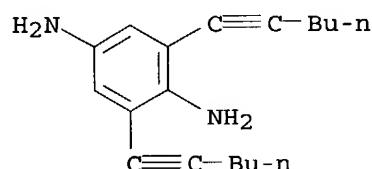
SR CA

LC STN Files: CA, CAPLUS, TOXCENTER

CM 1

CRN 156074-99-6

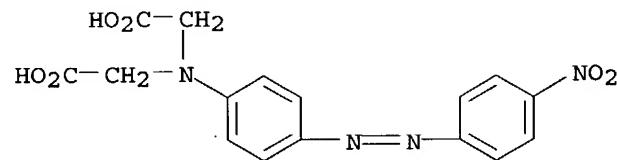
CMF C18 H24 N2



CM 2

CRN 141209-18-9

CMF C16 H14 N4 O6



1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L25 ANSWER 5 OF 28 REGISTRY COPYRIGHT 2003 ACS

RN 147318-35-2 REGISTRY

CN Glycine, N-(carboxymethyl)-N-(4-chlorophenyl)-, compd. with ethanol (1:1), monohydrate (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

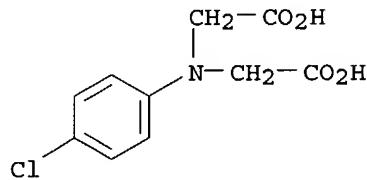
CN Ethanol, compd. with N-(carboxymethyl)-N-(4-chlorophenyl)glycine (1:1), monohydrate (9CI)

MF C10 H10 Cl N O4 . C2 H6 O . H2 O

SR CA  
LC STN Files: CA, CAPLUS

CM 1

CRN 30042-69-4  
CMF C10 H10 Cl N O4



CM 2

CRN 64-17-5  
CMF C2 H6 O

H<sub>3</sub>C—CH<sub>2</sub>—OH

1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L25 ANSWER 6 OF 28 REGISTRY COPYRIGHT 2003 ACS

RN 141209-19-0 REGISTRY

CN Glycine, N-(carboxymethyl)-N-[4-[(4-nitrophenyl)azol]phenyl]-, polymer with 2,6-di-1-octynyl-1,4-benzenediamine (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 1,4-Benzenediamine, 2,6-di-1-octynyl-, polymer with N-(carboxymethyl)-N-[4-[(4-nitrophenyl)azol]phenyl]glycine (9CI)

MF (C<sub>22</sub> H<sub>32</sub> N<sub>2</sub> . C<sub>16</sub> H<sub>14</sub> N<sub>4</sub> O<sub>6</sub>)<sub>x</sub>

CI PMS

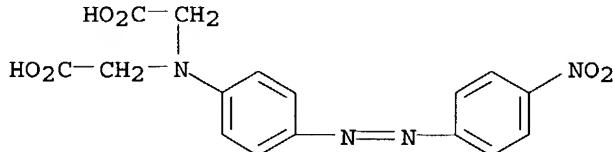
PCT Polyacetylene, Polyamide, Polyamide formed, Polyamine

SR CA

LC STN Files: CA, CAPLUS, TOXCENTER

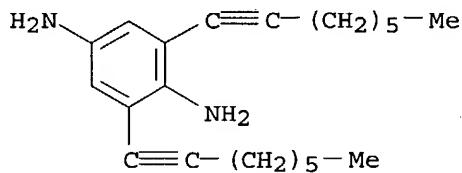
CM 1

CRN 141209-18-9  
CMF C<sub>16</sub> H<sub>14</sub> N<sub>4</sub> O<sub>6</sub>



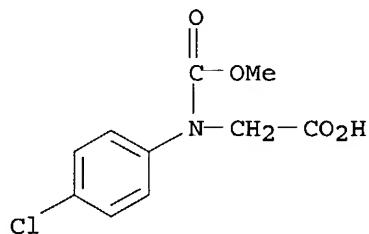
CM 2

CRN 126297-22-1  
CMF C<sub>22</sub> H<sub>32</sub> N<sub>2</sub>



2 REFERENCES IN FILE CA (1957 TO DATE)  
 2 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L25 ANSWER 7 OF 28 REGISTRY COPYRIGHT 2003 ACS  
 RN 111530-66-6 REGISTRY  
 CN Glycine, N-(4-chlorophenyl)-N-(methoxycarbonyl)- (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN Carbanilic acid, N-(carboxymethyl)-p-chloro-, 1-methyl ester (6CI)  
 OTHER NAMES:  
 CN N-Methoxycarbonyl-N-4-chlorophenylglycine  
 FS 3D CONCORD  
 MF C10 H10 Cl N O4  
 CI COM  
 SR CAOLD  
 LC STN Files: CA, CAOLD, CAPLUS, USPATFULL



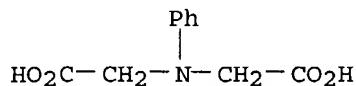
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)  
 1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L25 ANSWER 8 OF 28 REGISTRY COPYRIGHT 2003 ACS  
 RN 62739-22-4 REGISTRY  
 CN Glycine, N-(carboxymethyl)-N-phenyl-, polymer with formaldehyde and phenol (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN Formaldehyde, polymer with N-(carboxymethyl)-N-phenylglycine and phenol (9CI)  
 CN Phenol, polymer with N-(carboxymethyl)-N-phenylglycine and formaldehyde (9CI)  
 OTHER NAMES:  
 CN Anilinediacetic acid-formaldehyde-phenol copolymer  
 CN Formaldehyde-phenol-N-phenyliminodiacetic acid copolymer  
 MF (C10 H11 N O4 . C6 H6 O . C H2 O)x  
 CI PMS  
 PCT Phenolic resin, Polyether  
 LC STN Files: CA, CAPLUS

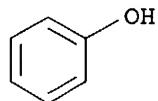
CM 1

CRN 1137-73-1  
 CMF C10 H11 N O4



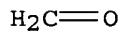
CM 2

CRN 108-95-2  
CMF C6 H6 O



CM 3

CRN 50-00-0  
CMF C H2 O



5 REFERENCES IN FILE CA (1957 TO DATE)  
5 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L25 ANSWER 9 OF 28 REGISTRY COPYRIGHT 2003 ACS

RN 50658-97-4 REGISTRY

CN Glycine, N-(carboxymethyl)-N-(2-hydroxyphenyl)-, polymer with 1,3-benzenediol and formaldehyde (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 1,3-Benzenediol, polymer with N-(carboxymethyl)-N-(2-hydroxyphenyl)glycine and formaldehyde (9CI)

CN Formaldehyde, polymer with 1,3-benzenediol and N-(carboxymethyl)-N-(2-hydroxyphenyl)glycine (9CI)

OTHER NAMES:

CN Formaldehyde-o-hydroxyphenyliminodiacetic acid-resorcinol polymer  
MF (C10 H11 N O5 . C6 H6 O2 . C H2 O)x

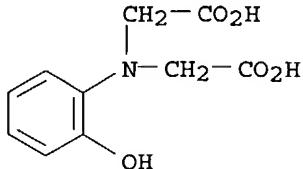
CI PMS

PCT Phenolic resin, Polyamine, Polyester, Polyester formed

LC STN Files: CA, CAPLUS

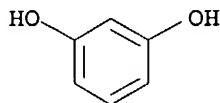
CM 1

CRN 6243-03-4  
CMF C10 H11 N O5



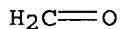
CM 2

CRN 108-46-3  
CMF C6 H6 O2



CM 3

CRN 50-00-0  
CMF C H2 O

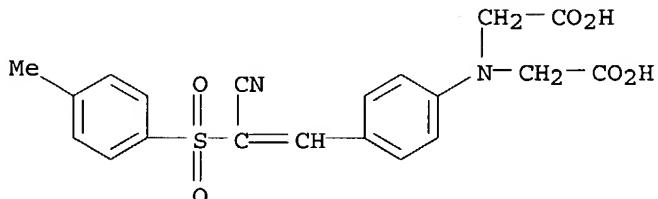


1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L25 ANSWER 10 OF 28 REGISTRY COPYRIGHT 2003 ACS  
RN 39719-75-0 REGISTRY  
CN Glycine, N-(carboxymethyl)-N-[4-[2-cyano-2-[(4-methylphenyl)sulfonyl]ethenyl]phenyl]-, compd. with piperidine (1:1) (9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN Piperidine, compd. with N-(carboxymethyl)-N-[4-[2-cyano-2-[(4-methylphenyl)sulfonyl]ethenyl]phenyl]glycine (1:1) (9CI)  
MF C20 H18 N2 O6 S . C5 H11 N  
LC STN Files: BEILSTEIN\*, CA, CAPLUS  
(\*File contains numerically searchable property data)

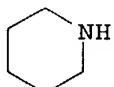
CM 1

CRN 47634-00-4  
CMF C20 H18 N2 O6 S



CM 2

CRN 110-89-4  
CMF C5 H11 N



1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L25 ANSWER 11 OF 28 REGISTRY COPYRIGHT 2003 ACS  
RN 38330-22-2 REGISTRY

CN Glycine, N-(carboxymethyl)-N-[4-[(1,3-diethyltetrahydro-4,6-dioxo-2-thioxo-5(2H)-pyrimidinylidene)methyl]phenyl]-, compd. with piperidine (1:1) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Piperidine, compd. with N-(carboxymethyl)-N-[4-[(1,3-diethyltetrahydro-4,6-dioxo-2-thioxo-5(2H)-pyrimidinylidene)methyl]phenyl]glycine (1:1) (9CI)

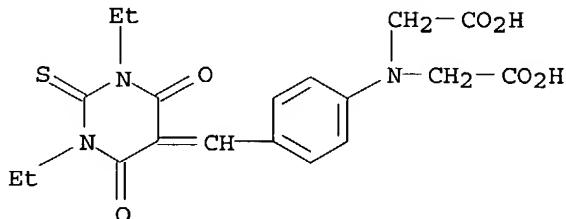
MF C19 H21 N3 O6 S . C5 H11 N

LC STN Files: CA, CAPLUS, IFICDB, IFIPAT, IFIUDB

CM 1

CRN 47623-90-5

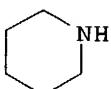
CMF C19 H21 N3 O6 S



CM 2

CRN 110-89-4

CMF C5 H11 N



1 REFERENCES IN FILE CA (1957 TO DATE)

1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L25 ANSWER 12 OF 28 REGISTRY COPYRIGHT 2003 ACS

RN 37424-16-1 REGISTRY

CN Glycine, N-(carboxymethyl)-N-[4-[(2-cyano-3-(2-naphthalenylamino)-3-oxo-1-propenyl]phenyl]-, compd. with piperidine (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Piperidine, compd. with N-(carboxymethyl)-N-[4-[(2-cyano-3-(2-naphthalenylamino)-3-oxo-1-propenyl]phenyl]glycine (9CI)

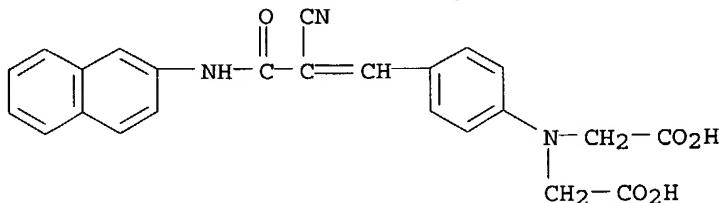
MF C24 H19 N3 O5 . x C5 H11 N

LC STN Files: CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL

CM 1

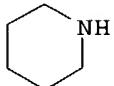
CRN 47709-95-5

CMF C24 H19 N3 O5



CM 2

CRN 110-89-4  
CMF C5 H11 N

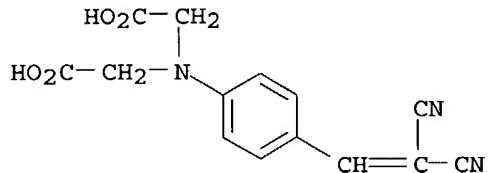


1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L25 ANSWER 13 OF 28 REGISTRY COPYRIGHT 2003 ACS  
 RN 37424-13-8 REGISTRY  
 CN Glycine, N-(carboxymethyl)-N-[4-(2,2-dicyanoethenyl)phenyl]-, compd.  
 with piperidine (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN Piperidine, compd. with N-(carboxymethyl)-N-[4-(2,2-dicyanoethenyl)phenyl]glycine (9CI)  
 MF C14 H11 N3 O4 . x C5 H11 N  
 LC STN Files: CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL

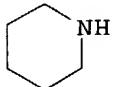
CM 1

CRN 47161-19-3  
CMF C14 H11 N3 O4



CM 2

CRN 110-89-4  
CMF C5 H11 N



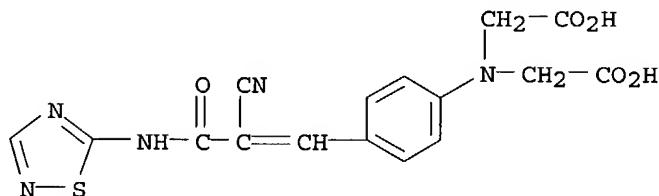
1 REFERENCES IN FILE CA (1957 TO DATE)

1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L25 ANSWER 14 OF 28 REGISTRY COPYRIGHT 2003 ACS  
 RN 37403-37-5 REGISTRY  
 CN Glycine, N-(carboxymethyl)-N-[4-[2-cyano-3-oxo-3-(1,2,4-thiadiazol-5-ylamino)-1-propenyl]phenyl]-, compd. with piperidine (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN 1,2,4-Thiadiazole, glycine deriv.  
 CN Piperidine, compd. with N-(carboxymethyl)-N-[4-[2-cyano-3-oxo-3-(1,2,4-thiadiazol-5-ylamino)-1-propenyl]phenyl]glycine (9CI)  
 MF C16 H13 N5 O5 S . x C5 H11 N  
 LC STN Files: CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL

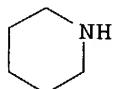
CM 1

CRN 47551-25-7  
 CMF C16 H13 N5 O5 S



CM 2

CRN 110-89-4  
 CMF C5 H11 N

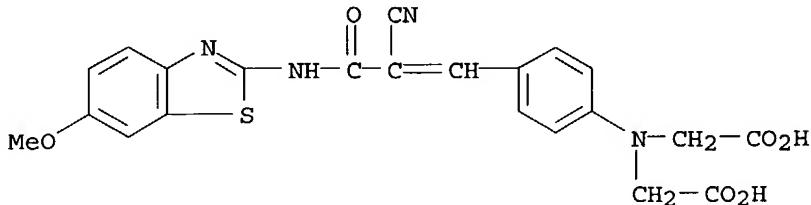


1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L25 ANSWER 15 OF 28 REGISTRY COPYRIGHT 2003 ACS  
 RN 37403-35-3 REGISTRY  
 CN Glycine, N-(carboxymethyl)-N-[4-[2-cyano-3-[(6-methoxy-2-benzothiazolyl)amino]-3-oxo-1-propenyl]phenyl]-, compd. with piperidine (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN Piperidine, compd. with N-(carboxymethyl)-N-[4-[2-cyano-3-[(6-methoxy-2-benzothiazolyl)amino]-3-oxo-1-propenyl]phenyl]glycine (9CI)  
 MF C22 H18 N4 O6 S . x C5 H11 N  
 LC STN Files: BEILSTEIN\*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL  
 (\*File contains numerically searchable property data)

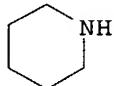
CM 1

CRN 47733-93-7  
 CMF C22 H18 N4 O6 S



CM 2

CRN 110-89-4  
CMF C5 H11 N

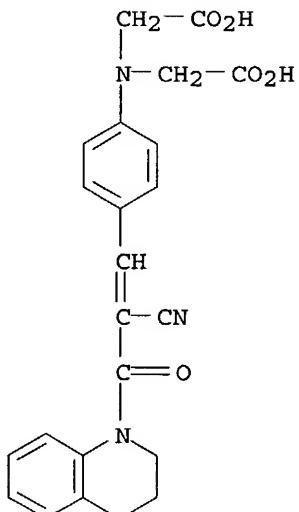


1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L25 ANSWER 16 OF 28 REGISTRY COPYRIGHT 2003 ACS  
 RN 37403-28-4 REGISTRY  
 CN Glycine, N-(carboxymethyl)-N-[4-[2-cyano-3-(3,4-dihydro-1(2H)-quinolinyl)-3-oxo-1-propenyl]phenyl]-, compd. with piperidine (9CI)  
 (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN Piperidine, compd. with N-(carboxymethyl)-N-[4-[2-cyano-3-(3,4-dihydro-1(2H)-quinolinyl)-3-oxo-1-propenyl]phenyl]glycine (9CI)  
 MF C23 H21 N3 O5 . x C5 H11 N  
 LC STN Files: BEILSTEIN\*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL  
 (\*File contains numerically searchable property data)

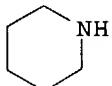
CM 1

CRN 47682-59-7  
CMF C23 H21 N3 O5



CM 2

CRN 110-89-4  
CMF C5 H11 N

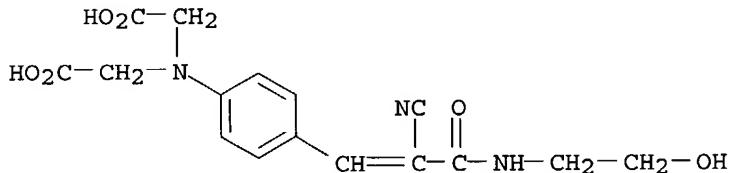


1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L25 ANSWER 17 OF 28 REGISTRY COPYRIGHT 2003 ACS  
RN 37401-40-4 REGISTRY  
CN Glycine, N-(carboxymethyl)-N-[4-[2-cyano-3-[(2-hydroxyethyl)amino]-3-oxo-1-propenyl]phenyl]-, compd. with piperidine (9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN Piperidine, compd. with N-(carboxymethyl)-N-[4-[2-cyano-3-[(2-hydroxyethyl)amino]-3-oxo-1-propenyl]phenyl]glycine (9CI)  
MF C16 H17 N3 O6 . x C5 H11 N  
LC STN Files: BEILSTEIN\*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL  
(\*File contains numerically searchable property data)

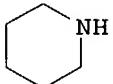
CM 1

CRN 47454-14-8  
CMF C16 H17 N3 O6



CM 2

CRN 110-89-4  
CMF C5 H11 N



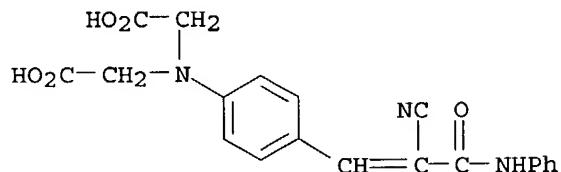
1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L25 ANSWER 18 OF 28 REGISTRY COPYRIGHT 2003 ACS  
RN 37401-38-0 REGISTRY  
CN Glycine, N-(carboxymethyl)-N-[4-[2-cyano-3-oxo-3-(phenylamino)-1-propenyl]phenyl]-, compd. with piperidine (9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:

CN Piperidine, compd. with N-(carboxymethyl)-N-[4-[2-cyano-3-oxo-3-(phenylamino)-1-propenyl]phenyl]glycine (9CI)  
MF C20 H17 N3 O5 . x C5 H11 N  
LC STN Files: CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL

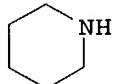
CM 1

CRN 47588-86-3  
CMF C20 H17 N3 O5



CM 2

CRN 110-89-4  
CMF C5 H11 N



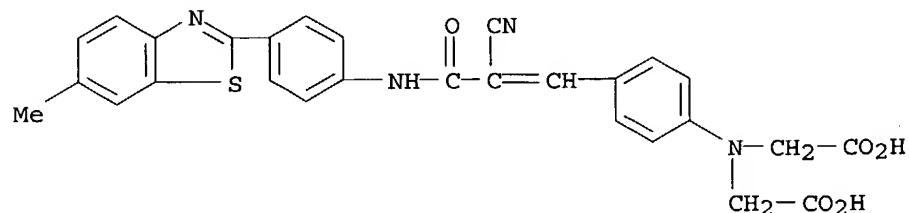
1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L25 ANSWER 19 OF 28 REGISTRY COPYRIGHT 2003 ACS  
RN 37401-27-7 REGISTRY  
CN Glycine, N-(carboxymethyl)-N-[4-[2-cyano-3-[[4-(6-methyl-2-benzothiazolyl)phenyl]amino]-3-oxo-1-propenyl]phenyl]-, compd. with piperidine (9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN Piperidine, compd. with N-(carboxymethyl)-N-[4-[2-cyano-3-[[4-(6-methyl-2-benzothiazolyl)phenylamino]-3-oxo-1-propenyl]phenyl]glycine (9CI)

MF C28 H22 N4 O5 S . x C5 H11 N  
LC STN Files: CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL

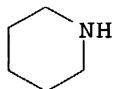
CM 1

CRN 47802-17-5  
CMF C28 H22 N4 O5 S



CM 2

CRN 110-89-4  
CMF C5 H11 N

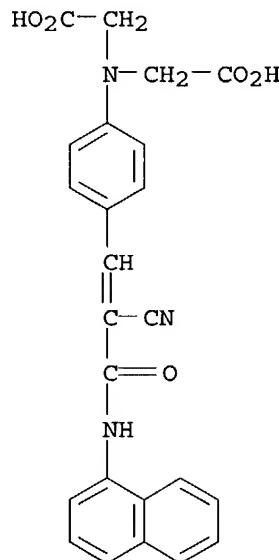


1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L25 ANSWER 20 OF 28 REGISTRY COPYRIGHT 2003 ACS  
RN 37401-26-6 REGISTRY  
CN Glycine, N-(carboxymethyl)-N-[4-[2-cyano-3-(1-naphthalenylamino)-3-oxo-1-propenyl]phenyl]-, compd. with piperidine (9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN Piperidine, compd. with N-(carboxymethyl)-N-[4-[2-cyano-3-(1-naphthalenylamino)-3-oxo-1-propenyl]phenyl]glycine (9CI)  
MF C24 H19 N3 O5 . x C5 H11 N  
LC STN Files: CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL

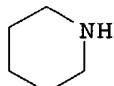
CM 1

CRN 47706-89-8  
CMF C24 H19 N3 O5



CM 2

CRN 110-89-4  
CMF C5 H11 N

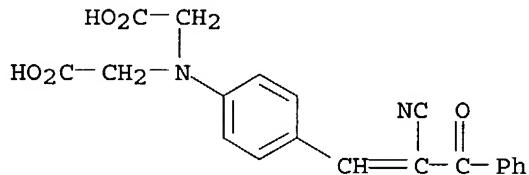


1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L25 ANSWER 21 OF 28 REGISTRY COPYRIGHT 2003 ACS  
RN 37401-22-2 REGISTRY  
CN Glycine, N-(carboxymethyl)-N-[4-(2-cyano-3-oxo-3-phenyl-1-propenyl)phenyl]-, compd. with piperidine (9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN Piperidine, compd. with N-(carboxymethyl)-N-[4-(2-cyano-3-oxo-3-phenyl-1-propenyl)phenyl]glycine (9CI)  
MF C20 H16 N2 O5 . x C5 H11 N  
LC STN Files: CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL

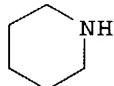
CM 1

CRN 47553-28-6  
CMF C20 H16 N2 O5



CM 2

CRN 110-89-4  
CMF C5 H11 N

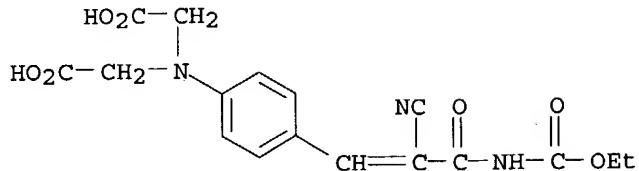


1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L25 ANSWER 22 OF 28 REGISTRY COPYRIGHT 2003 ACS  
RN 37400-98-9 REGISTRY  
CN Glycine, N-(carboxymethyl)-N-[4-[2-cyano-3-[(ethoxycarbonyl)amino]-3-oxo-1-propenyl]phenyl]-, compd. with piperidine (9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN Piperidine, compd. with N-(carboxymethyl)-N-[4-[2-cyano-3-[(ethoxycarbonyl)amino]-3-oxo-1-propenyl]phenyl]glycine (9CI)  
MF C17 H17 N3 O7 . x C5 H11 N  
LC STN Files: BEILSTEIN\*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL  
(\*File contains numerically searchable property data)

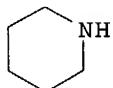
CM 1

CRN 47551-26-8  
CMF C17 H17 N3 O7



CM 2

CRN 110-89-4  
CMF C5 H11 N

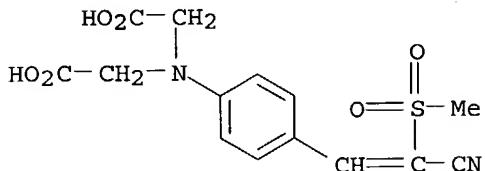


1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L25 ANSWER 23 OF 28 REGISTRY COPYRIGHT 2003 ACS  
 RN 37400-97-8 REGISTRY  
 CN Glycine, N-(carboxymethyl)-N-[4-[2-cyano-2-(methylsulfonyl)ethenyl]phenyl]-, compd. with piperidine (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN Piperidine, compd. with N-(carboxymethyl)-N-[4-[2-cyano-2-(methylsulfonyl)ethenyl]phenyl]glycine (9CI)  
 MF C14 H14 N2 O6 S . x C5 H11 N  
 LC STN Files: BEILSTEIN\*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL  
 (\*File contains numerically searchable property data)

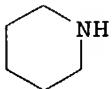
CM 1

CRN 50580-14-8  
CMF C14 H14 N2 O6 S



CM 2

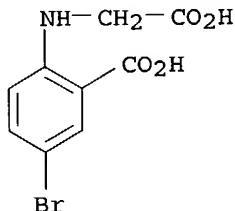
CRN 110-89-4  
CMF C5 H11 N



1 REFERENCES IN FILE CA (1957 TO DATE)

1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

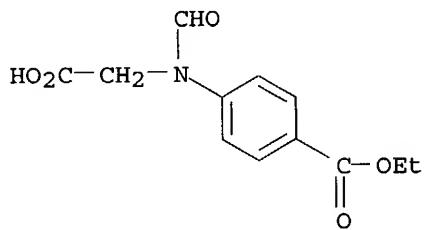
L25 ANSWER 24 OF 28 REGISTRY COPYRIGHT 2003 ACS  
RN 32253-75-1 REGISTRY  
CN Benzoic acid, 5-bromo-2-[(carboxymethyl)amino]- (9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN Anthranilic acid, 5-bromo-N-(carboxymethyl)- (8CI)  
OTHER NAMES:  
CN 5-Bromo-2-carboxyphenylglycine  
CN 5-Bromo-N-(carboxymethyl)anthranilic acid  
FS 3D CONCORD  
MF C9 H8 Br N O4  
LC STN Files: BEILSTEIN\*, CA, CAPLUS, CASREACT, CHEMCATS, CHEMLIST,  
MSDS-OHS  
(\*File contains numerically searchable property data)  
Other Sources: DSL\*\*, EINECS\*\*  
(\*\*Enter CHEMLIST File for up-to-date regulatory information)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

6 REFERENCES IN FILE CA (1957 TO DATE)  
6 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L25 ANSWER 25 OF 28 REGISTRY COPYRIGHT 2003 ACS  
RN 17399-51-8 REGISTRY  
CN Benzoic acid, p-[N-(carboxymethyl)formamido]-, ethyl ester (8CI)  
(CA INDEX NAME)  
OTHER NAMES:  
CN N-Formyl-N-(4-carbethoxyphenyl)glycine  
FS 3D CONCORD  
MF C12 H13 N 05  
LC STN Files: BEILSTEIN\*, CA, CAPLUS  
(\*File contains numerically searchable property data)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

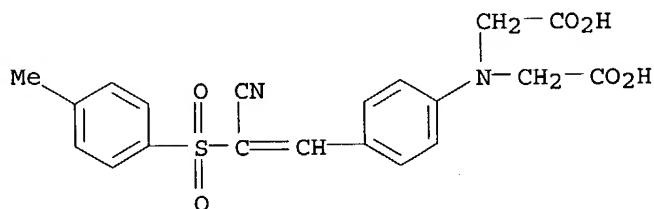
L25 ANSWER 26 OF 28 REGISTRY COPYRIGHT 2003 ACS  
RN 16093-04-2 REGISTRY

CN Glycine, N-(carboxymethyl)-N-[4-[2-cyano-2-[(4-methylphenyl)sulfonyl]ethenyl]phenyl]-, compd. with piperidine (9CI)  
 (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN Acetic acid, [[p-[2-cyano-2-(p-tolylsulfonyl)vinyl]phenyl]iminodio-,  
 compd. with piperidine (8CI)  
 CN Piperidine, compd. with N-(carboxymethyl)-N-[4-[2-cyano-2-[(4-methylphenyl)sulfonyl]ethenyl]phenyl]glycine (9CI)  
 CN Piperidine, compd. with [[p-[2-cyano-2-(p-tolylsulfonyl)vinyl]phenyl]imino]diacetic acid  
 CN Piperidine, [[p-[2-cyano-2-(p-tolylsulfonyl)vinyl]phenyl]iminodiacetate  
 (8CI)  
 MF C20 H18 N2 O6 S . x C5 H11 N  
 LC STN Files: BEILSTEIN\*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL  
 (\*File contains numerically searchable property data)

CM 1

CRN 47634-00-4

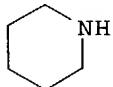
CMF C20 H18 N2 O6 S



CM 2

CRN 110-89-4

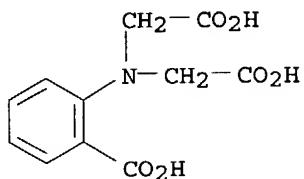
CMF C5 H11 N



2 REFERENCES IN FILE CA (1957 TO DATE)  
 2 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L25 ANSWER 27 OF 28 REGISTRY COPYRIGHT 2003 ACS  
 RN 1147-65-5 REGISTRY  
 CN Benzoic acid, 2-[bis(carboxymethyl)amino]- (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN Acetic acid, [(o-carboxyphenyl)imino]di- (6CI, 7CI)  
 CN Anthranilic acid, N,N-bis(carboxymethyl)- (8CI)  
 OTHER NAMES:  
 CN ANDA  
 CN Anthranil-N,N-diacetic acid  
 CN Anthranildiacetic acid  
 CN Anthranilic-N,N-diacetic acid  
 CN N,N-Bis(carboxymethyl)anthranilic acid  
 CN N-(o-Carboxyphenyl)iminodiacetic acid  
 CN N-Carboxymethyl-N-(2-carboxyphenyl)glycine  
 MF C11 H11 N O6  
 CI COM  
 LC STN Files: BEILSTEIN\*, CA, CAOLD, CAPLUS, CHEMCATS, CSCHEM, GMELIN\*,  
 TOXCENTER, USPAT2, USPATFULL

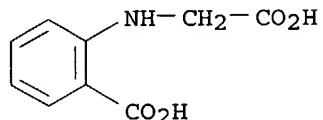
(\*File contains numerically searchable property data)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

98 REFERENCES IN FILE CA (1957 TO DATE)  
17 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
98 REFERENCES IN FILE CAPLUS (1957 TO DATE)  
20 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L25 ANSWER 28 OF 28 REGISTRY COPYRIGHT 2003 ACS  
RN 612-42-0 REGISTRY  
CN Benzoic acid, 2-[(carboxymethyl)amino]- (9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN Anthranilic acid, N-(carboxymethyl)- (6CI, 7CI, 8CI)  
OTHER NAMES:  
CN N-(2-Carboxyphenyl)glycine  
CN N-(Carboxymethyl)anthranilic acid  
FS 3D CONCORD  
MF C9 H9 N O4  
CI COM  
LC STN Files: BEILSTEIN\*, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST,  
CSChem, GMELIN\*, HODOC\*, TOXCENTER, USPATFULL  
(\*File contains numerically searchable property data)  
Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*  
(\*\*Enter CHEMLIST File for up-to-date regulatory information)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

44 REFERENCES IN FILE CA (1957 TO DATE)  
2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
44 REFERENCES IN FILE CAPLUS (1957 TO DATE)  
9 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> d his

(FILE 'HOME' ENTERED AT 16:12:39 ON 30 APR 2003)

FILE 'REGISTRY' ENTERED AT 16:12:51 ON 30 APR 2003

L1 12 S CARBOXYPHENOXYACETIC ACID  
L2 1 S HYDROQUINONE O O DIACETIC ACID  
L3 0 S CAROXY O ANISIC ACID  
L4 0 S CARBOXY O ANISIC ACID  
L5 190 S CARBOXY AND ANISIC ACID  
L6 2719 S ANISIC ACID

L7 1 S ANISIC ACID/CN  
L8 190 S CARBOXY AND ANISIC ACID  
L9 4 S RESORCINOL AND DIACETIC ACID  
L10 28918 S NAPHTHALENECARBOXYLIC ACID  
L11 6 S CARBOXYMETHYL AND THIO AND NAPHTHALENECARBOXYLIC ACID  
L12 0 S CARBOXYMETHYLTBIO ADJ BENZOIC ACID  
L13 18 S CARBOXYMETHYLTBIO AND BENZO?

FILE 'CA' ENTERED AT 16:23:05 ON 30 APR 2003  
S 101714-12-9/REG#

FILE 'REGISTRY' ENTERED AT 16:23:09 ON 30 APR 2003  
L14 1 S 101714-12-9/RN

FILE 'CA' ENTERED AT 16:23:09 ON 30 APR 2003  
L15 2 S L14  
L16 62628 S PHOTO? AND (IR OR INFRARED OR INFRA RED)  
L17 34 S L16 AND CARBOXYMETHYL

FILE 'REGISTRY' ENTERED AT 16:26:23 ON 30 APR 2003  
L18 0 S DIANISIDINE AND N AND TETRAACETIC ACID  
L19 0 S DIANISIDINE AND TETRAACETIC ACID  
L20 0 S DIANISIDINE AND ACETIC ACID  
L21 10 S DIANISIDINE AND ACID  
L22 41 S DIANISIDINE  
L23 7351 S N CARBOXYMETHYL AND GLYCINE  
L24 2193 S L23 AND PHENYL  
L25 28 S N CARBOXYMETHYL AND PHENYL GLYCINE

=> S 1147-65-5  
L26 1 1147-65-5  
(1147-65-5/RN)

=> file ca  
COST IN U.S. DOLLARS SINCE FILE TOTAL  
ENTRY SESSION  
FULL ESTIMATED COST 233.34 494.49  
  
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) SINCE FILE TOTAL  
ENTRY SESSION  
CA SUBSCRIBER PRICE 0.00 -1.86

FILE 'CA' ENTERED AT 16:44:05 ON 30 APR 2003  
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PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
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FILE COVERS 1907 - 24 Apr 2003 VOL 138 ISS 18  
FILE LAST UPDATED: 24 Apr 2003 (20030424/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 126  
L27 98 L26

=> s 127 and photo?  
1143616 PHOTO?  
L28 25 L27 AND PHOTO?

=> s 128 and (ir or infrared or infra red)  
492857 IR  
221359 INFRARED  
3776 INFRA  
326624 RED  
3341 INFRA RED  
(INFRA(W)RED)  
L29 1 L28 AND (IR OR INFRARED OR INFRA RED)

=> d

L29 ANSWER 1 OF 1 CA COPYRIGHT 2003 ACS  
AN 121:145177 CA  
TI Processing of silver halide color photographic material  
IN Abe, Akira; Seki, Hiroyuki; Okada, Hisashi; Inaba, Tadashi  
PA Fuji Photo Film Co Ltd, Japan  
SO Jpn. Kokai Tokkyo Koho, 55 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN.CNT 1  

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 05307251    | A2   | 19931119 | JP 1992-134535  | 19920428 |
|      | US 5350668     | A    | 19940927 | US 1993-53198   | 19930428 |
| PRAI | JP 1992-134535 |      | 19920428 |                 |          |

=> d all

L29 ANSWER 1 OF 1 CA COPYRIGHT 2003 ACS  
AN 121:145177 CA  
TI Processing of silver halide color photographic material  
IN Abe, Akira; Seki, Hiroyuki; Okada, Hisashi; Inaba, Tadashi  
PA Fuji Photo Film Co Ltd, Japan  
SO Jpn. Kokai Tokkyo Koho, 55 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM G03C007-42  
ICS G03C001-035; G03C001-43  
CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
FAN.CNT 1  

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 05307251    | A2   | 19931119 | JP 1992-134535  | 19920428 |
|      | US 5350668     | A    | 19940927 | US 1993-53198   | 19930428 |
| PRAI | JP 1992-134535 |      | 19920428 |                 |          |

AB In processing a photog. material having on its support .gtoreq.1 Ag halide emulsion layer by imagewise exposing and treating with a processing soln. possessing bleaching ability, the emulsion has plate AgBr(I) grains of aspect ratio .gtoreq.3, occupying .gtoreq.50 % of whole project area of Ag halide grains, and the processing soln. contains 0.01-0.17 mol/L Ir(II) o-carboxy-N,N-dimethylcarboxyaniline complex salt for example as bleaching agent. The processing with low bleaching agent content can accomplish desilvering well, and is kind to environment.

ST photog processing bleaching agent  
IT Photographic emulsions  
(plate silver bromide(iodide) grain specified)  
IT Photographic processing  
(with small amt. of bleaching agent)  
IT 1147-65-5D, iron complexes of 7439-89-6D, Iron, complexes with  
carboxyalkylamines 21454-02-4D, iron complexes of 26239-55-4D, iron  
complexes of 41575-11-5D, iron complexes of 101986-57-6D, iron  
complexes of 148063-49-4D, iron complexes of 148063-50-7D, iron  
complexes of  
RL: USES (Uses)  
(bleaching agent, for photog. processing)

=> d his

(FILE 'HOME' ENTERED AT 16:12:39 ON 30 APR 2003)

FILE 'REGISTRY' ENTERED AT 16:12:51 ON 30 APR 2003

L1 12 S CARBOXYPHENOXYACETIC ACID  
L2 1 S HYDROQUINONE O O DIACETIC ACID  
L3 0 S CAROXY O ANISIC ACID  
L4 0 S CARBOXY O ANISIC ACID  
L5 190 S CARBOXY AND ANISIC ACID  
L6 2719 S ANISIC ACID  
L7 1 S ANISIC ACID/CN  
L8 190 S CARBOXY AND ANISIC ACID  
L9 4 S RESORCINOL AND DIACETIC ACID  
L10 28918 S NAPHTHALENECARBOXYLIC ACID  
L11 6 S CARBOXYMETHYL AND THIO AND NAPHTHALENECARBOXYLIC ACID  
L12 0 S CARBOXYMETHYLTHIO ADJ BENZOIC ACID  
L13 18 S CARBOXYMETHYLTHIO AND BENZO?

FILE 'CA' ENTERED AT 16:23:05 ON 30 APR 2003  
S 101714-12-9/REG#

FILE 'REGISTRY' ENTERED AT 16:23:09 ON 30 APR 2003

L14 1 S 101714-12-9/RN

FILE 'CA' ENTERED AT 16:23:09 ON 30 APR 2003

L15 2 S L14  
L16 62628 S PHOTO? AND (IR OR INFRARED OR INFRA RED)  
L17 34 S L16 AND CARBOXYMETHYL

FILE 'REGISTRY' ENTERED AT 16:26:23 ON 30 APR 2003

L18 0 S DIANISIDINE AND N AND TETRAACETIC ACID  
L19 0 S DIANISIDINE AND TETRAACETIC ACID  
L20 0 S DIANISIDINE AND ACETIC ACID  
L21 10 S DIANISIDINE AND ACID  
L22 41 S DIANISIDINE  
L23 7351 S N CARBOXYMETHYL AND GLYCINE  
L24 2193 S L23 AND PHENYL  
L25 28 S N CARBOXYMETHYL AND PHENYL GLYCINE  
L26 1 S 1147-65-5

FILE 'CA' ENTERED AT 16:44:05 ON 30 APR 2003

L27 98 S L26  
L28 25 S L27 AND PHOTO?  
L29 1 S L28 AND (IR OR INFRARED OR INFRA RED)

=> s l28 not l29

L30 24 L28 NOT L29

=> d ti 1-24

L30 ANSWER 1 OF 24 CA COPYRIGHT 2003 ACS  
TI Processing of color **photographic** material containing pyrrolotriazole cyan coupler with ferric dicarboxylate complex bleaching agent to prevent stain formation

L30 ANSWER 2 OF 24 CA COPYRIGHT 2003 ACS  
TI Method for processing silver halide color **photographic** material using bleach solution containing sulfinate

L30 ANSWER 3 OF 24 CA COPYRIGHT 2003 ACS  
TI Processing of silver halide **photographic** material with good desilvering property and little bleaching fog

L30 ANSWER 4 OF 24 CA COPYRIGHT 2003 ACS  
TI Processing of silver halide color **photographic** material with bleaching solution

L30 ANSWER 5 OF 24 CA COPYRIGHT 2003 ACS  
TI Processing of silver halide color **photographic** materials and regenerating agent for bleaching solution used in the process

L30 ANSWER 6 OF 24 CA COPYRIGHT 2003 ACS  
TI Processing of silver halide color **photographic** material with superior desilvering property and improved image stability

L30 ANSWER 7 OF 24 CA COPYRIGHT 2003 ACS  
TI Rapid desilvering undergoing color **photographic** material and its processing

L30 ANSWER 8 OF 24 CA COPYRIGHT 2003 ACS  
TI Processing method of silver halide color **photographic** material

L30 ANSWER 9 OF 24 CA COPYRIGHT 2003 ACS  
TI Processing of silver halide color **photographic** material

L30 ANSWER 10 OF 24 CA COPYRIGHT 2003 ACS  
TI Processing of silver halide **photographic** materials

L30 ANSWER 11 OF 24 CA COPYRIGHT 2003 ACS  
TI processing of silver halide color **photographic** material

L30 ANSWER 12 OF 24 CA COPYRIGHT 2003 ACS  
TI processing of silver halide color **photographic** material

L30 ANSWER 13 OF 24 CA COPYRIGHT 2003 ACS  
TI Processing of silver halide color **photographic** materials and bleaching/fixing compositions therefor

L30 ANSWER 14 OF 24 CA COPYRIGHT 2003 ACS  
TI Silver halide **photographic** material resistant to metal-caused spotting

L30 ANSWER 15 OF 24 CA COPYRIGHT 2003 ACS  
TI Method for processing silver halide color **photographic** materials with little poor desilverization using automatic developing apparatuses

L30 ANSWER 16 OF 24 CA COPYRIGHT 2003 ACS  
TI Method for processing silver halide color **photographic** materials containing four-equivalent 5-pyrazolone magenta couplers

L30 ANSWER 17 OF 24 CA COPYRIGHT 2003 ACS  
TI **photographic** bleaching solution

L30 ANSWER 18 OF 24 CA COPYRIGHT 2003 ACS  
TI reducer for silver halide **photographic** material

L30 ANSWER 19 OF 24 CA COPYRIGHT 2003 ACS  
TI **Photographic** processing composition containing monoamine compound

L30 ANSWER 20 OF 24 CA COPYRIGHT 2003 ACS  
TI Kinetics and mechanisms of **photoinduced** reduction of iodine by monoamine-N-polycarboxylate ions in an aqueous solution

L30 ANSWER 21 OF 24 CA COPYRIGHT 2003 ACS  
TI Simultaneous spectrophotometric determination of gallium and indium

L30 ANSWER 22 OF 24 CA COPYRIGHT 2003 ACS  
TI **Photochronometric** determination of iron(III)

L30 ANSWER 23 OF 24 CA COPYRIGHT 2003 ACS  
TI Studies with complexons. Instrumentation and experimental technique

L30 ANSWER 24 OF 24 CA COPYRIGHT 2003 ACS  
TI Metallic complexes of N,N-bis(carboxymethyl)anthranilic acid

=> s ir or infrared or infra red  
492857 IR  
221359 INFRARED  
3776 INFRA  
326624 RED  
3341 INFRA RED  
(INFRA(W) RED)

L31 565336 IR OR INFRARED OR INFRA RED

=> s carboxymethyl and l31  
28062 CARBOXYMETHYL  
L32 954 CARBOXYMETHYL AND L31

=> s l32 and photo?  
1143616 PHOTO?  
L33 34 L32 AND PHOTO?

=> s l33 and lithograph?  
34550 LITHOGRAPH?  
L34 0 L33 AND LITHOGRAPH?

=> s l33 not l30  
L35 34 L33 NOT L30

=> d ti 1-34

L35 ANSWER 1 OF 34 CA COPYRIGHT 2003 ACS  
TI Diagnostic imaging compositions, their methods of synthesis, and use

L35 ANSWER 2 OF 34 CA COPYRIGHT 2003 ACS  
TI Efficient visible light sensitization of water-soluble near-infrared luminescent lanthanide complexes

L35 ANSWER 3 OF 34 CA COPYRIGHT 2003 ACS  
TI Processing of tetrazolium-containing silver halide **photographic** material with mercapto compound-containing developer to improve characteristic and dot quality

L35 ANSWER 4 OF 34 CA COPYRIGHT 2003 ACS  
TI Photocuring method by shielding oxygen on the surface of **photocurable** materials

L35 ANSWER 5 OF 34 CA COPYRIGHT 2003 ACS

TI Electron Spin Resonance Studies of Photocatalytic Interface Reactions of Suspended M/TiO<sub>2</sub> (M = Pt, Pd, Ir, Rh, Os, or Ru) with Alcohol and Acetic Acid in Aqueous Media

L35 ANSWER 6 OF 34 CA COPYRIGHT 2003 ACS

TI Photocrosslinking of water-soluble polymers bearing a pendant cyclohexene moiety

L35 ANSWER 7 OF 34 CA COPYRIGHT 2003 ACS

TI Development of silver halide photographic material by coating-application of developing solution

L35 ANSWER 8 OF 34 CA COPYRIGHT 2003 ACS

TI Photoacoustic FT-IR study on keratin chemically bound on the surface of silica gel particles

L35 ANSWER 9 OF 34 CA COPYRIGHT 2003 ACS

TI Substantivity through cationic substitution

L35 ANSWER 10 OF 34 CA COPYRIGHT 2003 ACS

TI Method of silver image formation

L35 ANSWER 11 OF 34 CA COPYRIGHT 2003 ACS

TI Photoelectrochemical studies of electrodes coated with merocyanine dye

L35 ANSWER 12 OF 34 CA COPYRIGHT 2003 ACS

TI Bonding in silver complexes of carboxylic acid substituted thionamides examined by infrared, laser-Raman, and x-ray photoelectron spectroscopy

L35 ANSWER 13 OF 34 CA COPYRIGHT 2003 ACS

TI Study of the effect of uv radiation on carboxyl-containing cellulose materials

L35 ANSWER 14 OF 34 CA COPYRIGHT 2003 ACS

TI Rapid hardening cement. III. Effects of keto carboxylic acids on the hydration of calcium sulfate hemihydrate

L35 ANSWER 15 OF 34 CA COPYRIGHT 2003 ACS

TI Addition compounds of bis(salicylaldehyde)ethylenediaminecopper. X. Synthesis of 3-(carboxyalkyl)salicylaldehyde derivatives and their copper chelates

L35 ANSWER 16 OF 34 CA COPYRIGHT 2003 ACS

TI Decomposable thermoplastic compositions

L35 ANSWER 17 OF 34 CA COPYRIGHT 2003 ACS

TI The preparation of biochemically interesting thio ethers of estrogens. II. 2-Methoxy-4-(carboxymethylthio)estrone 3-methyl ethers

L35 ANSWER 18 OF 34 CA COPYRIGHT 2003 ACS

TI Preparation and coordination studies of the complex acid, dihydrogen diethylenetriaminepentaacetatoferrocate(III) dihydrate, and several of its metal(I) salts

L35 ANSWER 19 OF 34 CA COPYRIGHT 2003 ACS

TI Structure of metal complexes of anthranyldiacetic acid

L35 ANSWER 20 OF 34 CA COPYRIGHT 2003 ACS

TI Heat-sensitive copying material

L35 ANSWER 21 OF 34 CA COPYRIGHT 2003 ACS

TI Synthetic studies leading to dl-telekin and dl-alantolactone

L35 ANSWER 22 OF 34 CA COPYRIGHT 2003 ACS  
TI Photolysis of silver alginate and silver carboxymethyl cellulose

L35 ANSWER 23 OF 34 CA COPYRIGHT 2003 ACS  
TI Halogen containing heterocyclic compounds. II. Halogenation of furfuryl derivatives-maleic anhydride adduct

L35 ANSWER 24 OF 34 CA COPYRIGHT 2003 ACS  
TI Light-sensitive materials with incorporated developing agents

L35 ANSWER 25 OF 34 CA COPYRIGHT 2003 ACS  
TI Synthesis of cyclobutane derivatives from unsaturated fatty acid esters. Photochemical reactions of muconic acid dimethyl ester and sorbic acid methyl ester

L35 ANSWER 26 OF 34 CA COPYRIGHT 2003 ACS  
TI Grafting of poly(vinyl chloride) (PVC) on cellulose and its derivatives

L35 ANSWER 27 OF 34 CA COPYRIGHT 2003 ACS  
TI Photochemical reactions. XVII. Photochemical transformations of O-acetyl-1-dehydrotestosterone. 2

L35 ANSWER 28 OF 34 CA COPYRIGHT 2003 ACS  
TI Thermographic formation of images in plastic films

L35 ANSWER 29 OF 34 CA COPYRIGHT 2003 ACS  
TI Photographic filter layer

L35 ANSWER 30 OF 34 CA COPYRIGHT 2003 ACS  
TI Couplers for photographic emulsions

L35 ANSWER 31 OF 34 CA COPYRIGHT 2003 ACS  
TI Cupric complexes as infrared-absorbing filters

L35 ANSWER 32 OF 34 CA COPYRIGHT 2003 ACS  
TI Stereospecific synthesis of (+)-O-methylpsychotrine and (-)-emetine

L35 ANSWER 33 OF 34 CA COPYRIGHT 2003 ACS  
TI Stereochemistry of tropane alkaloids. IX. Selective quaternization of 3.alpha.- and 3.beta.-tropanol and of their derivatives

L35 ANSWER 34 OF 34 CA COPYRIGHT 2003 ACS  
TI Forming films

=> d all 1-2,4

L35 ANSWER 1 OF 34 CA COPYRIGHT 2003 ACS  
AN 137:358081 CA  
TI Diagnostic imaging compositions, their methods of synthesis, and use  
IN Li, Chun; Wen, Xiaoxia; Wu, Qing-Ping; Wallace, Sydney; Ellis, Lee M.  
PA Board of Regents, the University of Texas System, USA  
SO PCT Int. Appl., 84 pp.  
CODEN: PIXXD2  
DT Patent  
LA English  
IC ICM A61K  
CC 63-5 (Pharmaceuticals)  
Section cross-reference(s): 1, 8  
FAN.CNT 2

| PATENT NO.   | KIND  | DATE     | APPLICATION NO. | DATE     |
|--|-------|----------|-----------------|----------|
| -----  | ----- | -----    | -----           | -----    |
| PI WO 2002087498   | A2    | 20021107 | WO 2002-US12510 | 20020419 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, |       |          |                 |          |

CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,  
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,  
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,  
PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,  
UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM  
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH,  
CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,  
BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2002197261 A1 20021226 US 2002-126369 20020419  
US 2003003048 A1 20030102 US 2002-126216 20020419

PRAI US 2001-286453P P 20010426  
US 2001-334969P P 20011204  
US 2001-343147P P 20011220

AB Conjugate mols. comprising a ligand bonded to a polymer are disclosed.  
One such conjugate mol. comprises a ligand bonded to a polymer, a chelating agent bonded to the polymer, and a radioisotope chelated to the chelating agent. The conjugate mols. may be useful in detecting and/or treating tumors or biol. receptors. These conjugate mols. may be synthesized without the necessity of preactivation of the ligand using an SCN-polymer-chelating agent precursor. Conjugate mols. incorporating an annexin V ligand are particularly useful for visualizing apoptotic cells. Conjugate mols. incorporating a C225 ligand are particularly useful for targeting tumors expressing EGFR.

ST indium 111 antibody annexin conjugate tumor imaging; immunoconjugate radiolabeled tumor targeting

IT Lymphoma  
(B-cell; diagnostic imaging compns. comprising radiolabeled conjugates)

IT Annexins  
RL: DGN (Diagnostic use); PKT (Pharmacokinetics); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(V, radiolabeled conjugates; diagnostic imaging compns. comprising radiolabeled conjugates)

IT Mammary gland  
(adenocarcinoma; diagnostic imaging compns. comprising radiolabeled conjugates)

IT Diagnosis  
(agents; diagnostic imaging compns. comprising radiolabeled conjugates)

IT Vascular endothelial growth factor receptors  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(antibodies to, radiolabeled; diagnostic imaging compns. comprising radiolabeled conjugates)

IT Intestine, neoplasm  
(colon; diagnostic imaging compns. comprising radiolabeled conjugates)

IT Apoptosis  
(compns. comprising radiolabeled conjugates for imaging drug-induced apoptosis)

IT Antibodies  
RL: DGN (Diagnostic use); BIOL (Biological study); USES (Uses)  
(conjugates, radiolabeled; diagnostic imaging compns. comprising radiolabeled conjugates)

IT RGD peptides  
RL: DGN (Diagnostic use); BIOL (Biological study); USES (Uses)  
(cyclic, radiolabeled; diagnostic imaging compns. comprising radiolabeled conjugates)

IT Bone, neoplasm  
Brain, neoplasm  
Drug delivery systems  
Human  
Hypoxia, animal  
Infection  
Inflammation  
Leukemia  
Liver, neoplasm  
Lung, neoplasm  
Multiple sclerosis

Neoplasm  
Ovary, neoplasm  
Pancreas, neoplasm  
Positron-emission tomography  
Radiopharmaceuticals  
Regeneration, animal  
Rheumatoid arthritis  
Scintigraphy  
Sickle cell anemia  
Single-photon-emission computed tomography  
Surgery  
Thalassemia  
Transplant rejection  
(diagnostic imaging compns. comprising radiolabeled conjugates)

IT Epidermal growth factor receptors  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(diagnostic imaging compns. comprising radiolabeled conjugates)

IT Toxicity  
(drug; diagnostic imaging compns. comprising radiolabeled conjugates)

IT Immunoglobulins  
RL: DGN (Diagnostic use); BIOL (Biological study); USES (Uses)  
(fragments, radiolabeled conjugates; diagnostic imaging compns.  
comprising radiolabeled conjugates)

IT Drug delivery systems  
(immunoconjugates; diagnostic imaging compns. comprising radiolabeled  
conjugates)

IT Drug delivery systems  
(injections; diagnostic imaging compns. comprising radiolabeled  
conjugates)

IT Reperfusion  
(injury; diagnostic imaging compns. comprising radiolabeled conjugates)

IT Brain, disease  
(ischemia; diagnostic imaging compns. comprising radiolabeled  
conjugates)

IT Antibodies  
RL: DGN (Diagnostic use); BIOL (Biological study); USES (Uses)  
(labeled; diagnostic imaging compns. comprising radiolabeled  
conjugates)

IT Dyes  
(near-IR; diagnostic imaging compns. comprising radiolabeled  
conjugates)

IT Head  
Mammary gland  
Neck, anatomical  
Prostate gland  
(neoplasm; diagnostic imaging compns. comprising radiolabeled  
conjugates)

IT Chelating agents  
(radiolabeled conjugates; diagnostic imaging compns. comprising  
radiolabeled conjugates)

IT Amines, biological studies  
Growth factors, animal  
Hepatocyte growth factor  
Interferons  
Ligands  
Peptides, biological studies  
Phosphines  
Polymers, biological studies  
Polyoxyalkylenes, biological studies  
Polysaccharides, biological studies  
Proteins  
Thiols (organic), biological studies  
Thrombospondins  
Tumor necrosis factors  
RL: DGN (Diagnostic use); BIOL (Biological study); USES (Uses)

(radiolabeled conjugates; diagnostic imaging compns. comprising radiolabeled conjugates)

IT Injury  
(trauma; diagnostic imaging compns. comprising radiolabeled conjugates)

IT Imaging  
(tumor; diagnostic imaging compns. comprising radiolabeled conjugates)

IT Reproductive tract  
(vulva, squamous cell carcinoma; diagnostic imaging compns. comprising radiolabeled conjugates)

IT Integrins  
RL: DGN (Diagnostic use); BIOL (Biological study); USES (Uses)  
(.alpha.v.beta.3, antibodies to, radiolabeled; diagnostic imaging compns. comprising radiolabeled conjugates)

IT 324740-00-3D, LM 609, radiolabeled conjugates  
RL: DGN (Diagnostic use); BIOL (Biological study); USES (Uses)  
(LM 609; diagnostic imaging compns. comprising radiolabeled conjugates)

IT 127464-60-2, Vascular endothelial growth factor  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(antibodies to, radiolabeled; diagnostic imaging compns. comprising radiolabeled conjugates)

IT 147-94-4, Ara-c 33069-62-4, Paclitaxel  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(compns. comprising radiolabeled conjugates for imaging drug-induced apoptosis)

IT 60-00-4D, EDTA, radiolabeled conjugates 295-37-4D, Cyclam, radiolabeled conjugates 365-08-2D, DTTP, radiolabeled conjugates 482-54-2D, 1,2-Cyclohexanediamine-N,N,N',N'-tetraacetic acid, radiolabeled conjugates 1429-50-1D, EDTMP, radiolabeled conjugates 2418-14-6D, Dimercaptosuccinic acid, radiolabeled conjugates 2809-21-4D, HEDP, radiolabeled conjugates 3565-84-2D, Cy-DTPA, radiolabeled conjugates 3599-32-4, Indocyanine green 9002-89-5D, Polyvinyl alcohol, radiolabeled conjugates 9003-01-4D, Polyacrylic acid, radiolabeled conjugates 9003-39-8D, Polyvinyl pyrrolidone, radiolabeled conjugates 9004-54-0D, Dextran, radiolabeled conjugates 9004-61-9D, Hyaluronic acid, radiolabeled conjugates 9012-76-4D, Chitosan, radiolabeled conjugates 9044-05-7D, Carboxymethyl dextran, radiolabeled conjugates 10098-91-6D, Yttrium 90, radiolabeled conjugates, biological studies 13981-25-4D, Copper 64, radiolabeled conjugates, biological studies 14119-09-6D, Gallium 67, conjugates labeled with, biological studies 14344-48-0D, radiolabeled conjugates 14391-63-0D, Rubidium 82, conjugates labeled with, biological studies 14809-53-1D, Yttrium 86, radiolabeled conjugates, biological studies 15064-65-0D, Thallium 201, radiolabeled conjugates, biological studies 15735-70-3D, Platinum 193, radiolabeled conjugates, biological studies 15757-14-9D, Gallium 68, conjugates labeled with, biological studies 15757-86-5D, Copper 67, radiolabeled conjugates, biological studies 15827-60-8D, DTPMP, radiolabeled conjugates 25104-13-6D, Poly(D-glutamic acid), radiolabeled conjugates 25104-18-1D, Polylysine, radiolabeled conjugates 25322-69-4D, Polypropylene oxide, radiolabeled conjugates 25608-40-6D, Poly(L-aspartic acid), radiolabeled conjugates 26063-13-8D, Poly(L-aspartic acid), radiolabeled conjugates 27878-59-7D, Poly(2-hydroxyethyl L-glutamine), radiolabeled conjugates 27881-01-2D, Poly(D-aspartic acid), radiolabeled conjugates 27881-03-4D, Poly(DL-aspartic acid), radiolabeled conjugates 38000-06-5D, Polylysine, radiolabeled conjugates 49717-32-0D, radiolabeled conjugates 60239-18-1D, DOTA, radiolabeled conjugates 60239-20-5D, TRITA, radiolabeled conjugates 60239-22-7D, TETA, radiolabeled conjugates 62031-54-3D, FGF, radiolabeled conjugates 62229-50-9D, EGF, radiolabeled conjugates 72772-21-5D, radiolabeled conjugates 86090-08-6D, Angiostatin, radiolabeled conjugates 91987-74-5D, DOTP, radiolabeled conjugates 104162-48-3D, DOTMA, radiolabeled conjugates 113786-33-7D, BOPTA, radiolabeled conjugates 120041-08-9D, HP-DO3A, radiolabeled conjugates 120041-09-0D, radiolabeled conjugates 131418-52-5D, radiolabeled conjugates 132446-35-6D, DOTMP, radiolabeled conjugates

133081-24-0D, 6-Hydrazinonicotinic acid, radiolabeled conjugates  
136705-18-5D, DOTE<sub>P</sub>, radiolabeled conjugates 138149-64-1D, DOTPP,  
radiolabeled conjugates 145089-54-9D, DOTBzP, radiolabeled conjugates  
158414-87-0D, Cy2-DTPA, radiolabeled conjugates 161167-43-7D, DOTPME,  
radiolabeled conjugates 174722-31-7D, Rituxan, radiolabeled conjugates  
180288-69-1D, Herceptin, radiolabeled conjugates 186270-49-5D,  
Angiopoietin 1, radiolabeled conjugates 187888-07-9D, Endostatin,  
radiolabeled conjugates 194368-66-6D, Angiopoietin 2, radiolabeled  
conjugates 215369-21-4D, DC101, radiolabeled conjugates 221230-66-6D,  
radiolabeled conjugates 244082-19-7D, radiolabeled conjugates  
474424-15-2D, radiolabeled conjugates  
RL: DGN (Diagnostic use); BIOL (Biological study); USES (Uses)  
(diagnostic imaging compns. comprising radiolabeled conjugates)

IT 67-43-6DP, DTPA, radiolabeled conjugates 15750-15-9DP, Indium 111,  
antibody conjugates labeled with, biological studies 25322-68-3DP, PEG,  
radiolabeled conjugates 205923-56-4DP, C225, radiolabeled conjugates  
RL: DGN (Diagnostic use); PKT (Pharmacokinetics); SPN (Synthetic  
preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(diagnostic imaging compns. comprising radiolabeled conjugates)

IT 24991-23-9D, paclitaxel conjugate  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
(Biological study); USES (Uses)  
(diagnostic imaging compns. comprising radiolabeled conjugates)

IT 77-77-0, Vinyl sulfone 122-04-3, p-Nitrobenzoyl chloride 541-59-3,  
Maleimide 23911-26-4, DTPA dianhydride 68181-17-9, SPDP 76931-93-6,  
N-Succinimidyl S-acetylthioacetate 198227-38-2  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(diagnostic imaging compns. comprising radiolabeled conjugates)

IT 474816-74-5P 474816-75-6P 474816-76-7P 474816-77-8P 474816-78-9P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(diagnostic imaging compns. comprising radiolabeled conjugates)

IT 474816-78-9DP, reaction products with annexin V  
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological  
study); PREP (Preparation); USES (Uses)  
(diagnostic imaging compns. comprising radiolabeled conjugates)

IT 477304-85-1P 477304-91-9P 477305-03-6P 477305-04-7P 477305-05-8P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(in polymer immunoconjugate preps. for tumor targeting)

IT 14133-76-7D, Technetium 99, radiolabeled conjugates, biological studies  
14885-78-0D, Indium 113, radiolabeled conjugates, biological studies  
RL: DGN (Diagnostic use); BIOL (Biological study); USES (Uses)  
(metastable; diagnostic imaging compns. comprising radiolabeled  
conjugates)

IT 25513-46-6D, Poly-L-glutamic acid, paclitaxel conjugate  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
(Biological study); USES (Uses)  
(radiolabeled conjugates; diagnostic imaging compns. comprising  
radiolabeled conjugates)

L35 ANSWER 2 OF 34 CA COPYRIGHT 2003 ACS  
AN 133:10882 CA  
TI Efficient visible light sensitization of water-soluble near-  
infrared luminescent lanthanide complexes  
AU Werts, Martinus H. V.; Verhoeven, Jan W.; Hofstraat, Johannes W.  
CS Laboratory of Organic Chemistry, University of Amsterdam, Amsterdam, 1018  
WS, Neth.  
SO Perkin 2 (2000), (3), 433-439  
CODEN: PRKTFO  
PB Royal Society of Chemistry  
DT Journal  
LA English  
CC 74-1 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)

Section cross-reference(s) : 73

AB Fluorexon (4',5'-bis[N,N-bis(carboxymethyl)aminomethyl]fluorescein) forms stable, water-sol. complexes with lanthanide ions. The complexes with neodymium(III), erbium(III) and ytterbium(III) display sensitized near-IR lanthanide luminescence upon excitation of the Fluorexon with visible light. The photosensitization efficiency is very high (0.5-1.0) as a result of lanthanide-enhanced intersystem crossing in the sensitizing chromophore and rapid intracomplex energy transfer. The overall luminescence quantum yields, however, are low (2 .times. 10<sup>-4</sup>-5 .times. 10<sup>-3</sup>) due to nonradiative deactivation of the excited lanthanide ion.

ST IR luminescent lanthanide complex Fluorexon

IT IR luminescence  
(near-; visible light sensitization of water-sol. near-IR luminescent lanthanide complexes of Fluorexon)

IT Luminescence quenching  
Triplet state transition  
(quenching of Fluorexon luminescence by lanthanide ions via complex formation)

IT Optical absorption  
(transient; visible light sensitization of water-sol. near-IR luminescent lanthanide complexes of Fluorexon)

IT Complexation  
Intersystem crossing  
(visible light sensitization of water-sol. near-IR luminescent lanthanide complexes of Fluorexon)

IT 14913-52-1, Neodymium(3+), properties 18472-30-5, Erbium(3+), properties 18923-27-8, Ytterbium(3+), properties  
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)  
(quenching of Fluorexon luminescence by lanthanide ions via complex formation)

IT 1461-15-0, Fluorexon 270568-14-4 270568-15-5 270568-16-6  
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)  
(visible light sensitization of water-sol. near-IR luminescent lanthanide complexes of Fluorexon)

RE.CNT 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L35 ANSWER 4 OF 34 CA COPYRIGHT 2003 ACS

AN 128:154902 CA

TI Photocuring method by shielding oxygen on the surface of photocurable materials

IN Kamata, Hirotoshi; Watanabe, Takeo; Oga, Kazuhiko; Sugita, Shuichi

PA Showa Denko K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08F002-48

ICS B29C067-00; C08F002-44; C09D004-00; C09D201-00

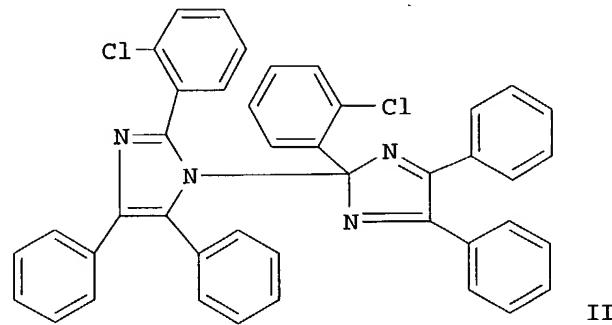
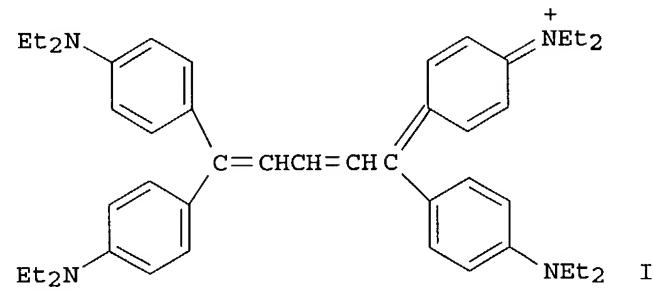
CC 37-6 (Plastics Manufacture and Processing)

Section cross-reference(s): 42

FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 10007707    | A2   | 19980113 | JP 1996-164728  | 19960625 |
| PRAI | JP 1996-164728 |      | 19960625 |                 |          |

GI



AB A method includes applying aq. solns. of film-formable water-sol. org. polymers on the surface of photocurable materials to shield O in the air and irradiating with visible ray and near-IR ray. The films made from the water-sol. org. polymers can be easily removed after photocuring. Preferably, the photocurable materials

contain (A) ethylenically unsatd. compds., (B) near-IR radical polymn. initiators, (C) visible ray radical polymn. initiators, and (D) .gtoreq.1 filler chosen from pigments, dyes, extender pigments, and fiber reinforcers. Thus, a compn. comprising Ripoxy SP 1509 75, styrene 25, talc 100, I butyltriphenylborate 0.10, tetrabutylammonium butyltriphenylborate 0.50, II 0.50, and 2-mercaptopbenzothiazole 0.50 part, was poured into a mold, coated with aq. 5% Poval 217 (III) on the surface of the compn., irradiated, and freed of the III film to give a cured product having a tack-free surface.

ST oxygen shield coating radical **photocuring**; vinyl ester styrene **photocuring**; polymn inhibitor oxygen shield

IT Polyoxalkylenes, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(PEO 15, coatings; **photocuring** method by coating with water-sol. polymers for shielding oxygen on **photocurable** compn. surfaces)

IT Epoxy resins, preparation  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PREP (Preparation); USES (Uses)  
(acrylates, polymers with styrene, **photocured**; **photocuring** method by coating with water-sol. polymers for shielding oxygen on **photocurable** compn. surfaces)

IT Polyesters, preparation  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PREP (Preparation); USES (Uses)  
(acrylic, **photocured**; **photocuring** method by coating with water-sol. polymers for shielding oxygen on **photocurable** compn. surfaces)

IT Gelatins, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(coatings; **photocuring** method by coating with water-sol. polymers for shielding oxygen on **photocurable** compn. surfaces)

IT Polymerization inhibitors  
(oxygen; **photocuring** method by coating with water-sol. polymers for shielding oxygen on **photocurable** compn. surfaces)

IT Polymerization catalysts  
Polymerization catalysts  
(photochem., radical; **photocuring** method by coating with water-sol. polymers for shielding oxygen on **photocurable** compn. surfaces)

IT Coating materials  
Shields  
(**photocuring** method by coating with water-sol. polymers for shielding oxygen on **photocurable** compn. surfaces)

IT Acrylic polymers, preparation  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PREP (Preparation); USES (Uses)  
(polyester-, **photocured**; **photocuring** method by coating with water-sol. polymers for shielding oxygen on **photocurable** compn. surfaces)

IT Polyesters, preparation  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PREP (Preparation); USES (Uses)  
(unsatd., **photocured**; **photocuring** method by coating with water-sol. polymers for shielding oxygen on **photocurable** compn. surfaces)

IT Polymers, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(water-sol.; **photocuring** method by coating with water-sol. polymers for shielding oxygen on **photocurable** compn. surfaces)

IT 25322-68-3, PEO 15  
RL: TEM (Technical or engineered material use); USES (Uses)

(PEO 15, coatings; **photocuring** method by coating with water-sol. polymers for shielding oxygen on **photocurable** compn. surfaces)

IT 9002-89-5, Poval 217  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (Poval 217, coatings; **photocuring** method by coating with water-sol. polymers for shielding oxygen on **photocurable** compn. surfaces)

IT 9003-39-8, Polyvinylpyrrolidone 9004-32-4, **Carboxymethyl** cellulose sodium salt 9005-25-8, Starch, uses 9057-02-7, Pullulan 28408-65-3, Poly(N-Vinylacetamide)  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (coatings; **photocuring** method by coating with water-sol. polymers for shielding oxygen on **photocurable** compn. surfaces)

IT 14807-96-6, Talc, uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (extender pigment; **photocuring** method by coating with water-sol. polymers for shielding oxygen on **photocurable** compn. surfaces)

IT 54847-75-5P, Rigolac 2141 115856-61-6P 115980-50-2P 137803-90-8P,  
 U-PICA 6424 202530-48-1P 202530-49-2P 202530-50-5P 202535-00-0P  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PREP (Preparation); USES (Uses)  
 (**photocured**; **photocuring** method by coating with water-sol. polymers for shielding oxygen on **photocurable** compn. surfaces)

IT 199128-41-1P, Rigolac G 200GMA  
 RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)  
 (**photocured**; **photocuring** method by coating with water-sol. polymers for shielding oxygen on **photocurable** compn. surfaces)

IT 7782-44-7, Oxygen, uses  
 RL: CAT (Catalyst use); USES (Uses)  
 (**photocuring** method by coating with water-sol. polymers for shielding oxygen on **photocurable** compn. surfaces)

IT 99-97-8, N,N-Dimethyl-p-toluidine 102-71-6, Triethanolamine, uses 103-01-5, n-Phenylglycine 134-81-6 149-30-4, 2-Mercaptobenzothiazole 583-39-1 21245-01-2, Isoamyl p-dimethylaminobenzoate 79044-56-7 96233-24-8 120307-06-4, Tetrabutylammonium butyltriphenylborate 141714-54-7 159116-57-1 174285-64-4, Irgacure 1700 174914-36-4 184591-58-0 189947-80-6 189947-84-0 189947-86-2 189947-87-3 192642-08-3 202530-51-6 202530-52-7 202530-53-8 202530-54-9  
 RL: CAT (Catalyst use); USES (Uses)  
 (**radical photopolymer** catalyst; **photocuring** method by coating with water-sol. polymers for shielding oxygen on **photocurable** compn. surfaces)

=> e munnely h/in

|     |       |                          |
|-----|-------|--------------------------|
| E1  | 1     | MUNNECKE DOUGLAS M/IN    |
| E2  | 1     | MUNNECKE GUSTAV ADOLF/IN |
| E3  | 0 --> | MUNNELLY H/IN            |
| E4  | 1     | MUNNELLY HEIDI M/IN      |
| E5  | 2     | MUNNES SIEGFRIED/IN      |
| E6  | 3     | MUNNICH ARNOLD/IN        |
| E7  | 1     | MUNNIG JURGEN/IN         |
| E8  | 1     | MUNNIG RAINER/IN         |
| E9  | 1     | MUNNING A P/IN           |
| E10 | 1     | MUNNING AUGUST PETER/IN  |
| E11 | 1     | MUNNING J/IN             |
| E12 | 1     | MUNNING JASON N/IN       |

=> s e4  
 L36 1 "MUNNELLY HEIDI M"/IN

=> d all

L36 ANSWER 1 OF 1 CA COPYRIGHT 2003 ACS  
AN 138:278451 CA  
TI On-press developable IR sensitive printing plates using binder resins having polyethylene oxide segments  
IN Huang, Jianbing; Munnelly, Heidi M.; Saraiya, Shashikant; Pappas, Socrates Peter  
PA USA  
SO U.S. Pat. Appl. Publ., 20 pp., Cont.-in-part of U.S. Ser. No. 826,300.  
CODEN: USXXCO  
DT Patent  
LA English  
IC ICM G03C001-76  
ICS G03C001-73; G03F007-027; G03F007-028; G03F007-032; G03F007-09;  
G03F007-26; G03F007-20  
NCL 430270100; 430271100; 430280100; 430281100; 430285100; 430302000;  
430330000; 430905000; 430906000; 430907000  
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s) : 35, 38  
FAN.CNT 2

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | US 2003064318  | A1   | 20030403 | US 2002-119454  | 20020410 |
|      | US 2002155375  | A1   | 20021024 | US 2001-826300  | 20010404 |
| PRAI | US 2001-826300 | A2   | 20010404 |                 |          |

AB The present invention relates to a polymerizable coating compn. suitable for the manuf. of printing plates developable on-press. The coating compn. comprises (i) a polymerizable compd. and (ii) a polymeric binder comprising polyethylene oxide segments, wherein the polymeric binder is selected from the group consisting of at least one graft copolymer comprising a main chain polymer and polyethylene oxide side chains, a block copolymer having at least one polyethylene oxide block and at least one non-polyethylene oxide block, and a combination thereof. The invention is also directed to an imageable element comprising a substrate and the polymerizable coating compn.

ST IR sensitive printing plates binder resins polyethylene oxide graft  
IT Polyoxyalkylenes, preparation  
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(acrylic, graft; binder resins for on-press developable IR sensitive printing plates)

IT Printing plates  
(on-press developable IR sensitive printing plates using binder resins having polyethylene oxide segments)

IT Polyoxyalkylenes, preparation  
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polystyrene-, graft; binder resins for on-press developable IR sensitive printing plates)

IT 170211-39-9P, Ethyleneoxide-methyl methacrylate graft copolymer methyl ether 176779-38-7P, Ethyleneoxide-styrene graft copolymer methyl ether 503569-50-4P 503569-51-5P 503569-52-6P 503569-53-7P 503605-14-9P 503605-15-0P  
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(binder resins for on-press developable IR sensitive printing plates)

IT 401624-10-0P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(macro-mer for binder resins for on-press developable IR sensitive printing plates)

IT 2094-99-7, m-Isopropenyl-.alpha.,.alpha.-dimethylbenzyl isocyanate

9004-74-4, Poly(ethyleneglycol monomethyl ether) 499770-39-7  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(prepn. of macro-mer for binder resins for on-press developable IR  
sensitive printing plates)

=> e munnelly h/au

E1 7 MUNNELL JOHN F/AU  
E2 1 MUNNELL MARK E/AU  
E3 0 --> MUNNELLY H/AU  
E4 1 MUNNELLY H M/AU  
E5 2 MUNNELLY HEIDI/AU  
E6 5 MUNNELLY HEIDI M/AU  
E7 7 MUNNELLY K P/AU  
E8 1 MUNNELLY KEVIN D/AU  
E9 2 MUNNELLY KEVIN P/AU  
E10 1 MUNNELLY P J/AU  
E11 1 MUNNELLY T I/AU  
E12 2 MUNNELLY TERENCE I/AU

=> s e4-e6

1 "MUNNELLY H M"/AU  
2 "MUNNELLY HEIDI"/AU  
5 "MUNNELLY HEIDI M"/AU  
L37 8 ("MUNNELLY H M"/AU OR "MUNNELLY HEIDI"/AU OR "MUNNELLY HEIDI  
M"/AU)

=> d all 1-8

L37 ANSWER 1 OF 8 CA COPYRIGHT 2003 ACS  
AN 138:278451 CA  
TI On-press developable IR sensitive printing plates using binder resins  
having polyethylene oxide segments  
IN Huang, Jianbing; **Munnelly, Heidi M.**; Saraiya, Shashikant;  
Pappas, Socrates Peter  
PA USA  
SO U.S. Pat. Appl. Publ., 20 pp., Cont.-in-part of U.S. Ser. No. 826,300.  
CODEN: USXXCO  
DT Patent  
LA English  
IC ICM G03C001-76  
ICS G03C001-73; G03F007-027; G03F007-028; G03F007-032; G03F007-09;  
G03F007-26; G03F007-20  
NCL 430270100; 430271100; 430280100; 430281100; 430285100; 430302000;  
430330000; 430905000; 430906000; 430907000  
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)  
Section cross-reference(s): 35, 38

FAN.CNT 2

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | US 2003064318  | A1   | 20030403 | US 2002-119454  | 20020410 |
|      | US 2002155375  | A1   | 20021024 | US 2001-826300  | 20010404 |
| PRAI | US 2001-826300 | A2   | 20010404 |                 |          |

AB The present invention relates to a polymerizable coating compn. suitable  
for the manuf. of printing plates developable on-press. The coating  
compn. comprises (i) a polymerizable compd. and (ii) a polymeric binder  
comprising polyethylene oxide segments, wherein the polymeric binder is  
selected from the group consisting of at least one graft copolymer  
comprising a main chain polymer and polyethylene oxide side chains, a  
block copolymer having at least one polyethylene oxide block and at least  
one non-polyethylene oxide block, and a combination thereof. The  
invention is also directed to an imageable element comprising a substrate  
and the polymerizable coating compn.

ST IR sensitive printing plates binder resins polyethylene oxide graft

IT Polyoxyalkylenes, preparation  
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(acrylic, graft; binder resins for on-press developable IR sensitive printing plates)

IT Printing plates  
(on-press developable IR sensitive printing plates using binder resins having polyethylene oxide segments)

IT Polyoxyalkylenes, preparation  
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polystyrene-, graft; binder resins for on-press developable IR sensitive printing plates)

IT 170211-39-9P, Ethyleneoxide-methyl methacrylate graft copolymer methyl ether 176779-38-7P, Ethyleneoxide-styrene graft copolymer methyl ether 503569-50-4P 503569-51-5P 503569-52-6P 503569-53-7P 503605-14-9P 503605-15-0P  
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(binder resins for on-press developable IR sensitive printing plates)

IT 401624-10-0P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(macro-mer for binder resins for on-press developable IR sensitive printing plates)

IT 2094-99-7, m-Isopropenyl-.alpha..alpha.-dimethylbenzyl isocyanate  
9004-74-4, Poly(ethyleneglycol monomethyl ether) 499770-39-7  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(prepn. of macro-mer for binder resins for on-press developable IR sensitive printing plates)

L37 ANSWER 2 OF 8 CA COPYRIGHT 2003 ACS  
AN 135:240581 CA  
TI Molecular dynamics of point mutated I-Ak molecules expressed on lymphocytes  
AU Munnelly, H. M.; Brady, C. J.; Hagen, G. M.; Horvat, R. D.; Wade, W. F.; Roess, D. A.; Barisas, B. G.  
CS Department of Chemistry, Colorado State University, Fort Collins, CO, 80523, USA  
SO Immunology Letters (2001), 77(3), 187-196  
CODEN: IMLED6; ISSN: 0165-2478  
PB Elsevier Science Ireland Ltd.  
DT Journal  
LA English  
CC 15-2 (Immunochemistry)  
AB The authors have recently reported the lateral and rotational diffusion parameters for I-Ak mols. expressing various cytoplasmic truncations. The authors now describe the membrane dynamics of I-Ak with various mutations in the presumed contact region between .alpha..beta.-heterodimers in an (.alpha..beta.)<sub>2</sub> dimer of dimers structure. Such mutations are known to strongly affect the antigen presentation ability of these mols. but cause relatively small changes in the mol. dynamics of I-Ak. Lateral diffusion coeffs. of I-Ak wild-type mols. and mutants obtained via fringe fluorescence photobleaching recovery (FPR) ranged from 1.1 to 2.3.times.10<sup>-10</sup>cm<sup>2</sup>/s at room temp. while fractional mobilities averaged 75%. For all cell types examined, treatment with either hen egg lysozyme 46-61 peptide or db-cAMP reduced the I-Ak mobile fraction by about 10% relative to untreated cells, suggesting that these treatments may increase lateral confinement of class II in lipid rafts or cytoskeletal interactions of the mols. Wild-type I-Ak and mutants capable of normal or partial antigen presentation exhibited, as a group, slightly longer rotational correlation times (RCT) at 4.degree. than did mutants inactive in antigen presentation, 14 vs. 10 .mu.s, resp. Moreover, peptide, cAMP and anti-CD40 mAb treatment all increased rotational correlation times for fully- and partially-functional I-Ak but not for non-functional mols. For

example, 16 h peptide treatment yielded av. RCTs of 28 and 10 .mu.s for the groups of functional and non-functional mols., resp. Such modulation of the dynamics of functional class II mols. is consistent with these treatments' stabilization of class II or induction of new gene expression. Measurements of fluorescence resonant energy transfer between I-Ak, though complicated by cellular autofluorescence, averaged 6% over 15 cells or treatments, a result consistent with the presence of a small fraction of I-Ak as a dimer of dimers species. In summary, the results suggest subtle changes in the mol. motions of class II mols. correlate with a significant impact on class II function. Mols. active in antigen presentation exhibit more restricted motion in the membrane, and thus presumably more extensive intermol. interactions, than non-functional mols. Further, treatments, such as db-cAMP and anti-CD40, which rescue antigen presentation by partially defective mutants, appear to increase such interactions, several types of which have already been reported for class II. A more detailed understanding of these phenomena will require both more sensitive biophys. tools and a more refined model of the role of class II intermol. interactions in antigen presentation.

ST mol dynamics IAk histocompatibility antigen  
IT Histocompatibility antigens  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(I-Ak; mol. dynamics of)  
IT CD40 (antigen)  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
(effect on lateral diffusion of I-Ak histocompatibility antigens by)  
IT Antigen presentation  
(lateral diffusion of I-Ak histocompatibility antigens in relation to function in)  
IT Diffusion  
(lateral; of I-Ak histocompatibility antigens)  
IT 60-92-4, CAMP  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
(effect on lateral diffusion of I-Ak histocompatibility antigens by)

RE.CNT 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L37 ANSWER 3 OF 8 CA COPYRIGHT 2003 ACS  
AN 134:37295 CA  
TI Luteinizing hormone receptors are self-associated in the plasma membrane  
AU Roess, Deborah A.; Horvat, Regina D.; Munnely, Heidi; Barisas, B. George  
CS Department of Physiology, Colorado State University, Fort Collins, CO, 80523, USA  
SO Endocrinology (2000), 141(12), 4518-4523  
CODEN: ENDOAO; ISSN: 0013-7227  
PB Endocrine Society  
DT Journal  
LA English  
CC 2-5 (Mammalian Hormones)  
AB The authors have evaluated rat LH receptor self-assocn. and lateral dynamics for functional and nonfunctional receptors after binding of hormone. The authors demonstrate, for the first time, that grouped receptors obsd. in electron or light microscopy represent actual receptor dimers or oligomers rather than simply the concn. of receptors within membrane microdomains. Fringe fluorescence photobleaching recovery methods showed that, after binding of either LH or human CG (hCG), functional wild-type LH receptors, expressed on 293 cells (LHR-wt cells), have mobilities that are 25% lower than those of nonfunctional LH receptors contg. an arginine substitution for lysine at position 583 (LHR-K583R cells). Because lateral diffusion coeffs. in two dimensions depend only on the logarithm of the mol. size of the diffusing species, this result implies that functional receptors exist in substantially larger membrane complexes than do nonfunctional receptors. In single-cell measurements of fluorescence energy transfer after hormone binding, functional LH receptors were also characterized by receptor self-aggregation. Values for fluorescence resonant energy transfer efficiency were 13% and 17% between fluorophore-conjugated LH or hCG, resp., bound to receptors on LHR-wt cells. However, there was little or no energy transfer between receptors on LHR-K583R cells. These results suggest that receptor functionality involves receptor-receptor interactions and that the extent of such receptor self-assocn. depends on whether LH or hCG binds the receptor.  
ST LH receptor selfassocn membrane function  
IT Cell membrane  
Self-association  
(LH receptors self-assocn. in plasma membrane in relation to function)  
IT Gonadotropin receptors  
RL: BPR (Biological process); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)  
(LH receptors self-assocn. in plasma membrane in relation to function)  
IT Dimers  
Oligomers  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(LH receptors self-assocn. in plasma membrane in relation to function)  
IT Gonadotropin receptors  
RL: PEP (Physical, engineering or chemical process); PROC (Process)  
(gonadotropin complexes; LH receptors self-assocn. in plasma membrane in relation to function)  
IT Microfilament  
(microfilament effect on LH receptors self-assocn. in plasma membrane in relation to function)  
IT 74-79-3, L-Arginine, biological studies  
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)

(LH receptor residue 583; LH receptors self-assocn. in plasma membrane  
in relation to function)

IT 9002-61-3, Chorionic gonadotropin 9002-67-9, LH  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)  
(LH receptors self-assocn. in plasma membrane in relation to function)

IT 9002-61-3D, Chorionic gonadotropin, receptor complexes 9002-67-9D, LH,  
receptor complexes  
RL: PEP (Physical, engineering or chemical process); PROC (Process)  
(LH receptors self-assocn. in plasma membrane in relation to function)

RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L37 ANSWER 4 OF 8 CA COPYRIGHT 2003 ACS

AN 133:308804 CA

TI Rotational and lateral dynamics of I-Ak molecules expressing cytoplasmic truncations

AU Munnell, Heidi M.; Brady, Cynthia J.; Hagen, Guy M.; Wade, William F.; Roess, Deborah A.; Barisas, B. George

CS Department of Chemistry, Colorado State University, Fort Collins, CO, 80523, USA

SO International Immunology (2000), 12(9), 1319-1328

CODEN: INIMEN; ISSN: 0953-8178

PB Oxford University Press

DT Journal

LA English

CC 15-2 (Immunochemistry)

AB Rotational and lateral diffusion of I-Ak mols. with various .alpha. and .beta. chain cytoplasmic truncations known to affect class II function were measured to assess the role of cytoplasmic domains in regulating I-Ak mol. motions. Deletion of all 12 .alpha. chain C-terminal residues and all 18 corresponding .beta. chain residues (.alpha.-12/.beta.-18) is known to abrogate translocation of protein kinase C to the nucleus upon class II crosslinking. Similarly, truncation of the entire cytoplasmic .alpha. chain domain and the 10 C-terminal residues of the .beta. chain impairs

presentation of antigenic peptides to T cells. The rotational correlation time of the wild-type mol., 11.9 .mu.s as measured by time-resolved phosphorescence anisotropy, decreased to 7.2 .mu.s in the fully truncated .alpha.-12/.beta.-18 protein. Other truncated class II mols. exhibited only small changes in mol. rotation rates relative to the wild-type. The rate of lateral diffusion of the fully truncated mol., measured with two independent methods, 2.3.times.10<sup>-10</sup> cm<sup>2</sup>/s, was comparable with that of the wild-type mol. Thus, it appears that the .alpha. and .beta. chain cytoplasmic domains regulate the mol. motions of unperturbed I-Ak mols. only modestly, despite the known involvement of these regions in class II signaling. Various explanations for this behavior are discussed, e.g. the possibility that class II membrane complexes are sufficiently large that assocn. and dissocn. of specific signaling proteins during antigen presentation do not significantly perturb the apparent mol. motions of the complex.

ST mol rotation lateral diffusion MHC class II  
IT Histocompatibility antigens  
RL: PEP (Physical, engineering or chemical process); PRP (Properties);  
PROC (Process)  
        (I-Ak; rotational and lateral dynamics of)  
IT Diffusion  
        (lateral; of I-Ak histocompatibility antigen)  
IT Molecular rotation  
        (of I-Ak histocompatibility antigen)

RE.CNT 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L37 ANSWER 5 OF 8 CA COPYRIGHT 2003 ACS  
AN 130:348768 CA  
TI Biophysical studies of major histocompatibility complex class II mutants  
AU Munnely, Heidi M.  
CS Colorado State Univ., Fort Collins, CO, USA  
SO (1998) 128 pp. Avail.: UMI, Order No. DA9911133  
From: Diss. Abstr. Int., B 1999, 59(11), 5827  
DT Dissertation  
LA English  
CC 6-3 (General Biochemistry)  
Section cross-reference(s): 15  
AB Unavailable  
ST major histocompatibility complex class II biophys properties; class II MHC  
antigen biophys properties  
IT Histocompatibility antigens  
RL: PRP (Properties)  
(MHC (major histocompatibility complex), class II; biophys. studies of  
major histocompatibility complex class II mutants)

L37 ANSWER 6 OF 8 CA COPYRIGHT 2003 ACS  
AN 129:227658 CA  
TI Interferometric fringe fluorescence photobleaching recovery interrogates  
entire cell surfaces  
AU Munnely, Heidi M.; Roess, Deborah A.; Wade, William F.;  
Barisas, B. George  
CS Department of Chemistry, Colorado State University, Fort Collins, CO,  
80523, USA  
SO Biophysical Journal (1998), 75(2), 1131-1138  
CODEN: BIOJAU; ISSN: 0006-3495  
PB Biophysical Society  
DT Journal  
LA English  
CC 9-5 (Biochemical Methods)  
AB Fluorescence photobleaching recovery (FPR) measurements of cell surface  
protein lateral diffusion typically employ an interrogated spot of 0.5  
.mu.m 1/e<sup>2</sup> radius. The effective spot area represents only 1/500 of the  
total surface of an 8-.mu.m cell. An FPR measurement of a protein  
expressed as 50,000 copies per cell reflects the dynamics of 100 mols.  
This limits the precision and reproducibility of FPR measurements. We  
describe a method for interferometric fringe pattern FPR that permits  
simultaneous interrogation of the entire cell's surface. Fringe patterns  
are generated interferometrically within the optical path of an FPR  
system. Methods for interpreting fluorescence recovery kinetics on cells  
and for detg. the protein mobile fraction are presented. With fringe FPR,  
the murine major histocompatibility complex class II antigen I-Ak  
expressed on M12.C3.F6 cells has 100-fold improved fluorescence signals  
relative to spot FPR, with corresponding improvements in signal-to-noise  
ratios of recovery traces. Diffusion coeffs. (.+- std. deviation) of  
(2.1 .+- 0.4) .times. 10-10 and (1.8 .+- 1.0) .times. 10-10 cm<sup>2</sup> s<sup>-1</sup> with  
corresponding mobile fractions of I-Ak of 66.1 .+- 7.8% and 63.4 .+-  
18.0% were obtained by fringe and spot methods, resp. The improved  
reproducibility of fringe over spot results is less than signal  
improvements predict. There may thus be substantial variation from cell  
to cell in protein dynamics, and this method may permit the assessment of  
such variation.  
ST interferometric fringe fluorescence photobleaching cell surface  
IT Cell  
Fluorescence  
Interferometers  
Photochemical bleaching  
(interferometric fringe fluorescence photobleaching recovery  
interrogates entire cell surfaces)  
IT Proteins, general, biological studies  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(interferometric fringe fluorescence photobleaching recovery

interrogates entire cell surfaces)

RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L37 ANSWER 7 OF 8 CA COPYRIGHT 2003 ACS  
AN 129:36583 CA  
TI Luteinizing hormone receptors are associated with non-receptor plasma membrane proteins on bovine luteal cell membranes  
AU Roess, Deborah A.; Rahman, Noorulhuda A.; Munnely, Heidi;  
Meiklejohn, Bruce I.; Brady, Cynthia J.; Barisas, B. G.  
CS Departments of Physiology, Colorado State University, Fort Collins, CO,  
80523, USA  
SO Biochimica et Biophysica Acta (1998), 1371(1), 5-10  
CODEN: BBACAQ; ISSN: 0006-3002  
PB Elsevier Science B.V.  
DT Journal  
LA English  
CC 2-5 (Mammalian Hormones)  
AB Biophys. studies of the bovine LH receptor on luteal cell membranes suggest that this receptor may be part of a larger mol. wt. structure. The authors have used 5-iodonaphthyl-1-azide (INA) to identify plasma membrane proteins near LH receptors on plasma membranes from bovine corpora lutea. Following binding of eosin isothiocyanate-derivatized ovine LH or human chorionic gonadotropin (hCG), five proteins with mol. wts. of 71, 57, 55, 49 and 36 kDa were selectively derivatized with [125I]-INA following 2 h exposure at 22.degree. to 514 nm light. However, there was no fluorescence energy transfer between LH receptors occupied by ovine LH or hCG indicating that LH receptors were not self-assocd. in these membrane preps. Together these results suggest that, following hormone binding, single copies of the LH receptor may exist in large mol. wt. structures that include non-receptor proteins.  
ST LH receptor protein luteal cell membrane  
IT Cell membrane  
Corpus luteum  
Self-association  
(LH receptors assocn. with non-receptor plasma membrane proteins on bovine luteal cell membranes)  
IT Gonadotropin receptors  
Proteins, general, biological studies  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(LH receptors assocn. with non-receptor plasma membrane proteins on bovine luteal cell membranes)  
IT 9002-61-3, Chorionic gonadotropin 9002-67-9, LH  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(LH receptors assocn. with non-receptor plasma membrane proteins on  
bovine luteal cell membranes)

RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L37 ANSWER 8 OF 8 CA COPYRIGHT 2003 ACS

AN 127:106139 CA

TI Interferometric fringe patterns interrogate entire cell surfaces in  
fluorescence photobleaching recovery measurements of lateral diffusion

AU Barisas, B. George; **Munnelly, Heidi M.**; Roess, Deborah A.

CS Departments of Chemistry and Physiology, Colorado State University, Fort  
Collins, CO, 80523, USA

SO Proceedings of SPIE-The International Society for Optical Engineering  
(1997), 2980(Advances in Fluorescence Sensing Technology III), 523-531

CODEN: PSISDG; ISSN: 0277-786X

PB SPIE-The International Society for Optical Engineering

DT Journal

LA English

CC 9-1 (Biochemical Methods)

Section cross-reference(s): 6, 15, 73

AB Lateral diffusion of cell surface proteins is commonly measured by spot  
fluorescence photobleaching recovery (FPR) methods where the 1/e<sup>2</sup> radius  
of the interrogated spot is typically 0.5 .mu.m. On an 8-.mu.m  
lymphocyte, the effective spot area represents only 1/500 of the total  
surface. An FPR lateral diffusion measurement of a protein expressed as  
50,000 copies per cell thus reflects the dynamics of only 100 mols. and  
this greatly limits the precision and reproducibility of FPR measurements.  
A new method for interferometric fringe pattern FPR permits simultaneous  
interrogation of the entire surface of round cells. Fringe patterns are  
generated interferometrically within the optical path of a conventional  
microscope FPR system so that spot photobleaching measurements can be  
performed interchangeably. Methods for interpreting recovery kinetics on  
round cells and for detg. the fraction of mobile protein are presented.  
Fringe FPR data of the murine MHC Class II antigen I-Ak (wt) expressed on  
M12.C3.F6 cells showed fluorescence signals improved 100-fold relative to  
spot FPR, with corresponding improvements in S/N ratios of recovery  
traces. Diffusion coeffs. of 2.07 .+- .37 and 1.79 .+- .97 .times.  
10-10 cm<sup>2</sup> s<sup>-1</sup> were obtained by fringe and spot methods, resp. The  
corresponding mobile fractions of I-Ak were 66.1 .+- .7.8% and 63.4 .+- .  
18.0%. Improved reproducibility of fringe over spot results are slightly  
less than signal improvements predict. There may thus be substantial  
variation from cell to cell in protein dynamics and this method may permit  
the assessment of such variation.

ST interferometry fluorescence photobleaching membrane protein diffusion;  
lateral diffusion protein cell surface interferometry; interferometric  
fringe FPR protein diffusion detn; fluorescence microscope interferometer  
protein lateral diffusion

IT Histocompatibility antigens

RL: PEP (Physical, engineering or chemical process); PRP (Properties);  
PROC (Process)

(I-Ak; interferometry/fluorescence photobleaching recovery detn. of  
cell surface protein lateral diffusion)

IT Histocompatibility antigens

RL: PEP (Physical, engineering or chemical process); PRP (Properties);

PROC (Process)  
     (MHC (major histocompatibility complex), class II;  
         interferometry/fluorescence photobleaching recovery detn. of cell  
         surface protein lateral diffusion)  
 IT   Proteins, specific or class  
     RL: PEP (Physical, engineering or chemical process); PRP (Properties);  
     PROC (Process)  
         (cell surface-assocd.; interferometry/fluorescence photobleaching  
         recovery detn. of cell surface protein lateral diffusion)  
 IT   Microscopes  
     (fluorescence; interferometry/fluorescence photobleaching recovery  
     detn. of cell surface protein lateral diffusion)  
 IT   Cell membrane  
     Fluorometry  
     Interferometers  
     Interferometry  
     Lymphocyte  
     Photochemical bleaching  
     Simulation and Modeling, physicochemical  
         (interferometry/fluorescence photobleaching recovery detn. of cell  
         surface protein lateral diffusion)  
 IT   Proteins, general, properties  
     RL: PEP (Physical, engineering or chemical process); PRP (Properties);  
     PROC (Process)  
         (interferometry/fluorescence photobleaching recovery detn. of cell  
         surface protein lateral diffusion)  
 IT   Diffusion  
     (lateral; interferometry/fluorescence photobleaching recovery detn. of  
     cell surface protein lateral diffusion)

=> e west p/au,in

|     |    |                 |
|-----|----|-----------------|
| E1  | 1  | WEST OSCAR A/AU |
| E2  | 1  | WEST OSCAR A/IN |
| E3  | 55 | --> WEST P/AU   |
| E4  | 1  | WEST P/IN       |
| E5  | 4  | WEST P A/AU     |
| E6  | 47 | WEST P C/AU     |
| E7  | 6  | WEST P C H/AU   |
| E8  | 4  | WEST P C H/IN   |
| E9  | 1  | WEST P D/AU     |
| E10 | 6  | WEST P E/AU     |
| E11 | 1  | WEST P F/AU     |
| E12 | 1  | WEST P G/AU     |

=> s e3-4

|     |    |                             |
|-----|----|-----------------------------|
|     | 55 | "WEST P"/AU                 |
|     | 1  | "WEST P"/IN                 |
| L38 | 55 | ("WEST P/AU OR "WEST P"/IN) |

=> e west paul/au,in

|     |    |                      |
|-----|----|----------------------|
| E1  | 1  | WEST PATRICK L/AU    |
| E2  | 1  | WEST PATRICK W J/AU  |
| E3  | 15 | --> WEST PAUL/AU     |
| E4  | 2  | WEST PAUL/IN         |
| E5  | 1  | WEST PAUL A/AU       |
| E6  | 5  | WEST PAUL D/AU       |
| E7  | 6  | WEST PAUL E/AU       |
| E8  | 1  | WEST PAUL E/IN       |
| E9  | 1  | WEST PAUL GERARD/AU  |
| E10 | 1  | WEST PAUL GERARD/IN  |
| E11 | 1  | WEST PAUL MICHAEL/AU |
| E12 | 1  | WEST PAUL MICHAEL/IN |

=> s e3-4

15 "WEST PAUL"/AU  
2 "WEST PAUL"/IN  
L39 15 ("WEST PAUL"/AU OR "WEST PAUL"/IN)

=> s 139 or 138  
L40 70 L39 OR L38

=> s 140 and (ir or infrared or infra red)  
492857 IR  
221359 INFRARED  
3776 INFRA  
326624 RED  
3341 INFRA RED  
(INFRA(W)RED)

L41 5 L40 AND (IR OR INFRARED OR INFRA RED)

=> d all 1-5

L41 ANSWER 1 OF 5 CA COPYRIGHT 2003 ACS  
AN 137:52258 CA  
TI FT-IR imaging spectroscopy of genetically modified bovine chondrocytes  
AU Camacho, N. P.; West, P.; Griffith, M. H.; Warren, R. F.;  
Hidaka, C.  
CS Laboratory for Soft Tissue Research, Research Division, Hospital for  
Special Surgery, New York, NY, 10021, USA  
SO Materials Science & Engineering, C: Biomimetic and Supramolecular Systems  
(2001), C17(1-2), 3-9  
CODEN: MSCEEE; ISSN: 0928-4931  
PB Elsevier Science B.V.  
DT Journal  
LA English  
CC 63-7 (Pharmaceuticals)  
AB Repair of articular cartilage defects remains a challenging problem in orthopedic surgery. Although novel tissue engineering technologies have facilitated the synthesis of cartilage-like tissue for implantation into defect sites, questions persist as to how to best evaluate the integration of these matrixes into cartilage and to assess their capability for regeneration and repair of the tissue. In the current study, Fourier transform IR imaging spectroscopy (FT-IRI) was utilized to study compositional changes in genetically modified bovine chondrocytes. With this technique, it was possible to evaluate the integration of the newly formed matrix into the articular cartilage substrate, and the content and distribution of the collagen and proteoglycan components in the repair tissue compared to native articular cartilage. Bovine chondrocytes were treated with an adenovirus (Ad) vector encoding bone morphogenetic protein-7 (AdBMP-7), transplanted onto bovine cartilage explants in vitro and the matrix evaluated by FT-IRI after 3 wk of growth. Data were acquired from a 400.times.400-.mu.m region of a histol. specimen at 7-.mu.m spatial resoln. FT-IR images were created based on collagen and proteoglycan content. It was apparent from these images that the AdBMP-7-treated chondrocyte matrix produced significantly more proteoglycan compared to both naive chondrocyte matrix, and to native bovine articular cartilage. However, the distribution of proteoglycan was very heterogeneous. In contrast, there was significantly less type II collagen in both AdBMP-7 and in naive chondrocyte matrix compared to the articular cartilage substrate. Overall, the new information obtained by FT-IR imaging spectroscopy will facilitate in design of new materials for cartilage regeneration and repair.  
ST adenovirus vector bone morphogenetic protein implant FTIR chondrocyte  
IT Bone morphogenetic proteins  
RL: BSU (Biological study, unclassified); DEV (Device component use); THU  
(Therapeutic use); BIOL (Biological study); USES (Uses)  
(7, adenovirus (Ad) vector encoded; FT-IR imaging  
spectroscopy of genetically modified bovine chondrocytes)

IT Chondrocyte  
Regeneration, animal  
Viral vectors  
(FT-IR imaging spectroscopy of genetically modified bovine chondrocytes)  
IT Proteoglycans, formation (nonpreparative)  
RL: FMU (Formation, unclassified); FORM (Formation, nonpreparative)  
(FT-IR imaging spectroscopy of genetically modified bovine chondrocytes)  
IT IR spectroscopy  
(Fourier-transform; FT-IR imaging spectroscopy of genetically modified bovine chondrocytes)  
IT Cartilage  
(articular; FT-IR imaging spectroscopy of genetically modified bovine chondrocytes)  
IT Prosthetic materials and Prosthetics  
(implants; FT-IR imaging spectroscopy of genetically modified bovine chondrocytes)  
IT Collagens, formation (nonpreparative)  
RL: FMU (Formation, unclassified); FORM (Formation, nonpreparative)  
(type II; FT-IR imaging spectroscopy of genetically modified bovine chondrocytes)

RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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L41 ANSWER 2 OF 5 CA COPYRIGHT 2003 ACS

AN 136:38553 CA

TI Polymers and their use in imagable products and image-forming methods

IN Kottmair, Eduard; Glatt, Hans-Horst; Hilgart, Stefan; West, Paul

PA Kodak Polychrome Graphics Co. Ltd., USA

SO PCT Int. Appl., 32 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM B41M005-36

ICS B41C001-10; G03F007-023

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 42, 74

FAN.CNT 1

PATENT NO.

KIND DATE

APPLICATION NO. DATE

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PI WO 2001094123 A1 20011213 WO 2001-US16716 20010522  
W: BR, JP  
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,  
PT, SE, TR  
US 6506533 B1 20030114 US 2000-589333 20000607  
EP 1289769 A1 20030312 EP 2001-935743 20010522  
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
IE, FI, CY, TR  
PRAI US 2000-589333 A 20000607  
WO 2001-US16716 W 20010522

AB IR absorbing polymers useful in imagable products and the lithog. printing field comprise **infra-red** absorbing groups carried as pendent groups on a polymer backbone. Certain **infra-red** absorbing groups may also act to insolubilize the polymer in a developer, until it is imagewise exposed to **infra-red** radiation. The resulting heat renders the polymer sol. in the developer. Imagable products employing the **infra-red** absorbing polymers may include pos. working lithog. printing plates.

ST IR absorbing polymer imagable product lithog printing

IT Phenolic resins, uses  
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(Cellobond J 1002G; **IR**-absorbing polymers and their use in imagable products and image-forming methods)

IT Cyanine dyes  
Lithographic plates  
Lithography  
(**IR**-absorbing polymers and their use in imagable products and image-forming methods)

IT Dyes  
(**IR**-absorbing; **IR**-absorbing polymers and their use in imagable products and image-forming methods)

IT Lithography  
(coatings; **IR**-absorbing polymers and their use in imagable products and image-forming methods)

IT Rubber, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(cyclized, phenol-contg.; **IR**-absorbing polymers and their use in imagable products and image-forming methods)

IT Polyethers, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(di-Me siloxane-, Byk 307, surfactant; **IR**-absorbing polymers and their use in imagable products and image-forming methods)

IT Polysiloxanes, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(di-Me, polyether-, Byk 307, surfactant; **IR**-absorbing polymers and their use in imagable products and image-forming methods)

IT Phenolic resins, uses  
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(novolak, cresol-based; **IR**-absorbing polymers and their use in imagable products and image-forming methods)

IT 9003-35-4, Phenol-formaldehyde resin  
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(Cellobond J 1002G; **IR**-absorbing polymers and their use in imagable products and image-forming methods)

IT 9011-14-7, PMMA 9039-25-2, Bakelite LB 6564 24979-70-2, Maruka Lyncur M 27029-76-1, PD 140A 36451-09-9D, reaction products with cresol resins 96913-05-2, Maruka Lyncur CBA 110123-09-6, Maruka Lyncur CHM 380412-69-1, Bakelite LA 751 380412-70-4, Bakelite LA 6823  
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(**IR**-absorbing polymers and their use in imagable products and

IT image-forming methods)  
9016-83-5, LB 744  
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(LB 744; IR-absorbing polymers and their use in imagable products and image-forming methods)  
IT 88969-31-7, Oxonol 595  
RL: NUU (Other use, unclassified); USES (Uses)  
(Oxonol 595; IR-absorbing polymers and their use in imagable products and image-forming methods)  
IT 10213-79-3, Sodium metasilicate pentahydrate  
RL: NUU (Other use, unclassified); USES (Uses)  
(developer; IR-absorbing polymers and their use in imagable products and image-forming methods)  
IT 199444-11-6, KF 654B-PINA 380414-14-2  
RL: NUU (Other use, unclassified); USES (Uses)  
(dye; IR-absorbing polymers and their use in imagable products and image-forming methods)  
IT 7429-90-5, Aluminum, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(substrate; IR-absorbing polymers and their use in imagable products and image-forming methods)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L41 ANSWER 3 OF 5 CA COPYRIGHT 2003 ACS  
AN 134:190217 CA  
TI FTIR microscopic imaging of collagen and proteoglycan in bovine cartilage  
AU Camacho, Nancy P.; West, Paul; Torzilli, Peter A.; Mendelsohn, Richard  
CS Research Division, The Hospital for Special Surgery, New York, NY, 10021,  
USA  
SO Biopolymers (2000), Volume Date 2001, 62(1), 1-8  
CODEN: BIPMAA; ISSN: 0006-3525  
PB John Wiley & Sons, Inc.  
DT Journal  
LA English  
CC 9-5 (Biochemical Methods)  
Section cross-reference(s): 13, 14  
AB Articular cartilage, a connective tissue that provides resistance to compressive forces during joint movements, has not been examd. in detail by conventional Fourier transform IR (FTIR) spectroscopy, microspectroscopy (FTIRM), or imaging (FTIRI). The current study reports FTIRM and FTIRI analyses of normal bovine cartilage and identifies the specific mol. components of cartilage that contribute to its IR spectrum. FTIRM data acquired through the superficial, middle, and deep zones of thin sections of bovine articular cartilage showed a variation in intensities of the absorbance bands that arise from the primary nonaq. components of cartilage, collagen, and proteoglycan (primarily aggrecan) and thus reflected the differences in quantity of these specific components. The spectra of mixts. of model compds., which had varying proportions of type II collagen and aggrecan, were analyzed to identify spectral markers that could be used to quant. analyze these components in cartilage. Collagen and aggrecan were then imaged by FTIRI based on markers found in the model compds. Polarization expts. were also performed to det. the spatial distribution of the collagen orientation in the different zones of cartilage. This study provides a framework in which complex pathol. changes in this heterogeneous tissue can be assessed by IR microscopic imaging.  
ST FTIR microscopy imaging collagen proteoglycan; cartilage Fourier transform IR microscopy  
IT Cartilage

(FTIR microscopic imaging of collagen and proteoglycan in bovine cartilage)

IT Aggrecans  
Collagens, analysis  
Proteoglycans, analysis  
RL: ANT (Analyte); ANST (Analytical study)  
(FTIR microscopic imaging of collagen and proteoglycan in bovine cartilage)

IT IR microspectroscopy  
(Fourier transform; FTIR microscopic imaging of collagen and proteoglycan in bovine cartilage)

IT Imaging  
(IR, Fourier transform; FTIR microscopic imaging of collagen and proteoglycan in bovine cartilage)

IT Microscopy  
(IR, Fourier-transform; FTIR microscopic imaging of collagen and proteoglycan in bovine cartilage)

IT Collagens, analysis  
RL: ANT (Analyte); ANST (Analytical study)  
(type II; FTIR microscopic imaging of collagen and proteoglycan in bovine cartilage)

RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L41 ANSWER 4 OF 5 CA COPYRIGHT 2003 ACS

AN 108:197121 CA

TI Kinetics and bonding considerations -- a guide to new coordination polymer structures with examples using cobalt and zirconium

AU Archer, R. D.; Tramontano, V. J.; Wang, B.; West, P.

CS Dep. Chem., Univ. Massachusetts, Amherst, MA, 01003, USA

SO Conference on Coordination Chemistry (1987), 11th, 1-6

CODEN: PCCHDB; ISSN: 0139-9535

DT Journal

LA English

CC 78-7 (Inorganic Chemicals and Reactions)  
AB ( $ZrL$ )<sub>n</sub> ( $H_4L = N,N',N'',N'''$ -tetrasalicylidene-3,3',4,4'-tetraaminobiphenyl) and {Co(S-leu)L'}<sub>n</sub> [leuH = leucine; H<sub>2</sub>L1 = 3,3'-dithiobis(2,4-pentanedione)] were prep'd. and characterized by gel permeation chromatog., NMR end group anal., viscosity measurements, and IR spectroscopy. The no.-av. mol. wts. are 10,000-20,000 for ZrL and  $\text{ltoreq} 40,000-50,000$  for fractionated samples of Co(S-leu)L'.  
ST zirconium salicylideneaminobiphenyl polymer; cobalt leucinato thiobis pentanedionato polymer; polymer coordination cobalt zirconium  
IT Polymerization  
(of zirconium salicylaldehyde complex with diaminobenzidine and cobalt acetylacetone leucinato complex with disulfur dichloride)  
IT 90-02-8, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(condensation reaction of zirconium-coordinated, with diaminobenzidine)  
IT 65531-97-7  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(condensation reaction of, with diaminobenzidine)  
IT 91-95-2, 3,3'-Diaminobenzidine  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(condensation reaction of, with zirconium salicylaldehyde complex)  
IT 10025-67-9  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(polymn. reaction by, with cobalt acetylacetone leucinato complex)  
IT 123-54-6, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(polymn. reaction of cobalt-coordinated, with disulfur dichloride)  
IT 17857-12-4  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(polymn. reaction of, with disulfur dichloride)  
IT 114354-76-6P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)  
IT 113986-74-6P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of polymeric)

L41 ANSWER 5 OF 5 CA COPYRIGHT 2003 ACS  
AN 88:42654 CA  
TI Infrared behavior of a gauge covariant approximation  
AU Delbourgo, R.; West, P.  
CS Dep. Phys., Univ. Tasmania, Hobart, Australia  
SO Physics Letters B (1977), 72B(1), 96-8  
CODEN: PYLBAJ; ISSN: 0370-2693  
DT Journal  
LA English  
CC 70-3 (Nuclear Phenomena)  
AB The IR behavior in scalar and fermion quantum electrodynamics is calcd. by using a gauge covariant approxn. scheme to the Dyson-Schwinger equations.  
ST IR gage quantum electrodynamics; field theory IR gage  
IT Quantum electrodynamics  
(in IR behavior of gage covariant approxn.)  
IT Field theory  
(gage, IR behavior of covariant approxn. in)

=> d his

(FILE 'HOME' ENTERED AT 16:12:39 ON 30 APR 2003)

FILE 'REGISTRY' ENTERED AT 16:12:51 ON 30 APR 2003

L1 12 S CARBOXYPHENOXYACETIC ACID  
L2 1 S HYDROQUINONE O O DIACETIC ACID  
L3 0 S CAROXY O ANISIC ACID

L4           0 S CARBOXY 0 ANISIC ACID  
L5           190 S CARBOXY AND ANISIC ACID  
L6           2719 S ANISIC ACID  
L7           1 S ANISIC ACID/CN  
L8           190 S CARBOXY AND ANISIC ACID  
L9           4 S RESORCINOL AND DIACETIC ACID  
L10          28918 S NAPHTHALENECARBOXYLIC ACID  
L11          6 S CARBOXYMETHYL AND THIO AND NAPHTHALENECARBOXYLIC ACID  
L12          0 S CARBOXYMETHYLTBIO ADJ BENZOIC ACID  
L13          18 S CARBOXYMETHYLTBIO AND BENZO?

FILE 'CA' ENTERED AT 16:23:05 ON 30 APR 2003  
S 101714-12-9/REG#

FILE 'REGISTRY' ENTERED AT 16:23:09 ON 30 APR 2003  
L14          1 S 101714-12-9/RN

FILE 'CA' ENTERED AT 16:23:09 ON 30 APR 2003  
L15          2 S L14  
L16          62628 S PHOTO? AND (IR OR INFRARED OR INFRA RED)  
L17          34 S L16 AND CARBOXYMETHYL

FILE 'REGISTRY' ENTERED AT 16:26:23 ON 30 APR 2003  
L18          0 S DIANISIDINE AND N AND TETRAACETIC ACID  
L19          0 S DIANISIDINE AND TETRAACETIC ACID  
L20          0 S DIANISIDINE AND ACETIC ACID  
L21          10 S DIANISIDINE AND ACID  
L22          41 S DIANISIDINE  
L23          7351 S N CARBOXYMETHYL AND GLYCINE  
L24          2193 S L23 AND PHENYL  
L25          28 S N CARBOXYMETHYL AND PHENYL GLYCINE  
L26          1 S 1147-65-5

FILE 'CA' ENTERED AT 16:44:05 ON 30 APR 2003  
L27          98 S L26  
L28          25 S L27 AND PHOTO?  
L29          1 S L28 AND (IR OR INFRARED OR INFRA RED)  
L30          24 S L28 NOT L29  
L31          565336 S IR OR INFRARED OR INFRA RED  
L32          954 S CARBOXYMETHYL AND L31  
L33          34 S L32 AND PHOTO?  
L34          0 S L33 AND LITHOGRAPH?  
L35          34 S L33 NOT L30  
            E MUNNELLY H/IN  
L36          1 S E4  
            E MUNNELLY H/AU  
L37          8 S E4-E6  
            E WEST P/AU, IN  
L38          55 S E3-4  
            E WEST PAUL/AU, IN  
L39          15 S E3-4  
L40          70 S L39 OR L38  
L41          5 S L40 AND (IR OR INFRARED OR INFRA RED)

=> s lithograph? and (ir or infrared or infra red)  
         34550 LITHOGRAPH?  
         492857 IR  
         221359 INFRARED  
         3776 INFRA  
         326624 RED  
         3341 INFRA RED  
          (INFRA(W)RED)  
L42         1364 LITHOGRAPH? AND (IR OR INFRARED OR INFRA RED)

=> s l42 and photo?

L43 1143616 PHOTO?  
827 L42 AND PHOTO?

=> s 143 and polymeriz?  
323447 POLYMERIZ?  
L44 67 L43 AND POLYMERIZ?

=> d 1

L44 ANSWER 1 OF 67 CA COPYRIGHT 2003 ACS  
AN 138:245659 CA  
TI Negative working lithographic printing plate master for digital  
direct platemaking by laser  
IN Taninaka, Hiromitsu  
PA Fuji Photo Film Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 15 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN.CNT 1  

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 2003084432  | A2   | 20030319 | JP 2001-273784  | 20010910 |
|      | US 2003068575  | A1   | 20030410 | US 2002-236913  | 20020909 |
| PRAI | JP 2001-273784 | A    | 20010910 |                 |          |

=> d all

L44 ANSWER 1 OF 67 CA COPYRIGHT 2003 ACS  
AN 138:245659 CA  
TI Negative working lithographic printing plate master for digital  
direct platemaking by laser  
IN Taninaka, Hiromitsu  
PA Fuji Photo Film Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 15 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM G03F007-004  
ICS G03F007-004; G03F007-00; G03F007-029  
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)  
FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 2003084432  | A2   | 20030319 | JP 2001-273784  | 20010910 |
|      | US 2003068575  | A1   | 20030410 | US 2002-236913  | 20020909 |
| PRAI | JP 2001-273784 | A    | 20010910 |                 |          |

AB The title printing plate master comprises on a support at least (A) an IR-absorbing agent, (B) an onium salt, (C) a radical polymerizable compd., (D) a binder polymer, and (E) an org. dye (precursor) capable of changing its color toner upon light-exposure.  
ST lithog printing plate master neg working digital direct platemaking  
IT Lithographic plates  
(neg.-working presensitized; neg. working lithog. printing plate master  
for digital direct platemaking by laser)  
IT Photoimaging materials  
(photopolymerizable; neg. working lithog. printing plate  
master for digital direct platemaking by laser)  
IT 134127-48-3  
RL: TEM (Technical or engineered material use); USES (Uses)  
(IR absorbing agent; in photosensitive layer of  
neg. working lithog. printing plate master for digital direct  
platemaking by laser)

IT 90216-38-9, Allyl methacrylate-methacrylic acid copolymer  
RL: TEM (Technical or engineered material use); USES (Uses)  
(binder polymer; in **photosensitive** layer of neg. working  
lithog. printing plate master for digital direct platemaking by laser)  
IT 29512-49-0, 3-Diethylamino-6-methyl-7-anilinofluoran  
RL: TEM (Technical or engineered material use); USES (Uses)  
(leuco dye; in **photosensitive** layer of neg. working lithog.  
printing plate master for digital direct platemaking by laser)  
IT 262612-33-9  
RL: TEM (Technical or engineered material use); USES (Uses)  
(onium salt; in **photosensitive** layer of neg. working lithog.  
printing plate master for digital direct platemaking by laser)  
IT 29570-58-9, Dipentaerythritol hexaacrylate  
RL: TEM (Technical or engineered material use); USES (Uses)  
(radical **polymerizable** compd.; in **photosensitive**  
layer of neg. working lithog. printing plate master for digital direct  
platemaking by laser)

=> d his

(FILE 'HOME' ENTERED AT 16:12:39 ON 30 APR 2003)

FILE 'REGISTRY' ENTERED AT 16:12:51 ON 30 APR 2003

L1 12 S CARBOXYPHENOXYACETIC ACID  
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L3 0 S CAROXY O ANISIC ACID  
L4 0 S CARBOXY O ANISIC ACID  
L5 190 S CARBOXY AND ANISIC ACID  
L6 2719 S ANISIC ACID  
L7 1 S ANISIC ACID/CN  
L8 190 S CARBOXY AND ANISIC ACID  
L9 4 S RESORCINOL AND DIACETIC ACID  
L10 28918 S NAPHTHALENECARBOXYLIC ACID  
L11 6 S CARBOXYMETHYL AND THIO AND NAPHTHALENECARBOXYLIC ACID  
L12 0 S CARBOXYMETHYLTHIO ADJ BENZOIC ACID  
L13 18 S CARBOXYMETHYLTHIO AND BENZO?

FILE 'CA' ENTERED AT 16:23:05 ON 30 APR 2003

S 101714-12-9/REG#

FILE 'REGISTRY' ENTERED AT 16:23:09 ON 30 APR 2003

L14 1 S 101714-12-9/RN

FILE 'CA' ENTERED AT 16:23:09 ON 30 APR 2003

L15 2 S L14  
L16 62628 S PHOTO? AND (IR OR INFRARED OR INFRA RED)  
L17 34 S L16 AND CARBOXYMETHYL

FILE 'REGISTRY' ENTERED AT 16:26:23 ON 30 APR 2003

L18 0 S DIANISIDINE AND N AND TETRAACETIC ACID  
L19 0 S DIANISIDINE AND TETRAACETIC ACID  
L20 0 S DIANISIDINE AND ACETIC ACID  
L21 10 S DIANISIDINE AND ACID  
L22 41 S DIANISIDINE  
L23 7351 S N CARBOXYMETHYL AND GLYCINE  
L24 2193 S L23 AND PHENYL  
L25 28 S N CARBOXYMETHYL AND PHENYL GLYCINE  
L26 1 S 1147-65-5

FILE 'CA' ENTERED AT 16:44:05 ON 30 APR 2003

L27 98 S L26  
L28 25 S L27 AND PHOTO?  
L29 1 S L28 AND (IR OR INFRARED OR INFRA RED)  
L30 24 S L28 NOT L29

L31 565336 S IR OR INFRARED OR INFRA RED  
 L32 954 S CARBOXYMETHYL AND L31  
 L33 34 S L32 AND PHOTO?  
 L34 0 S L33 AND LITHOGRAPH?  
 L35 34 S L33 NOT L30  
     E MUNNELLY H/IN  
 L36 1 S E4  
     E MUNNELLY H/AU  
 L37 8 S E4-E6  
     E WEST P/AU, IN  
 L38 55 S E3-4  
     E WEST PAUL/AU, IN  
 L39 15 S E3-4  
 L40 70 S L39 OR L38  
 L41 5 S L40 AND (IR OR INFRARED OR INFRA RED)  
 L42 1364 S LITHOGRAPH? AND (IR OR INFRARED OR INFRA RED)  
 L43 827 S L42 AND PHOTO?  
 L44 67 S L43 AND POLYMERIZ?

=> s carboxy and methyl and 144  
     62148 CARBOXY  
     818659 METHYL  
 L45 0 CARBOXY AND METHYL AND L44

=> s 143 and daylight  
     5525 DAYLIGHT  
 L46 1 L43 AND DAYLIGHT

=> d all

L46 ANSWER 1 OF 1 CA COPYRIGHT 2003 ACS  
 AN 134:200564 CA  
 TI Photopolymerizable composition containing specific dye for  
     light-sensitive lithographic original plate  
 IN Urano, Toshiyuki  
 PA Mitsubishi Chemical Corporation, Japan  
 SO PCT Int. Appl., 59 pp.  
     CODEN: PIXXD2  
 DT Patent  
 LA Japanese  
 IC ICM G03F007-028  
     ICS C08F002-48; G03F007-031; G03F007-00  
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other  
     Reproductive Processes)  
     Section cross-reference(s): 42

| FAN.CNT 1 | PATENT NO.   | KIND                       | DATE   | APPLICATION NO.   | DATE   |
|-----------|--|----------------------------|--|---|--|
| PI        | WO 2001014931<br>W: DE, US<br>JP 2002023361<br>JP 2002023362<br>JP 2002090989<br>US 2002114966   | A1<br>A2<br>A2<br>A2<br>A1 | 20010301<br>20020123<br>20020123<br>20020327<br>20020822 | WO 2000-JP5588<br>JP 2000-200400<br>JP 2000-207841<br>JP 2000-250764<br>US 2002-79408 | 20000821<br>20000703<br>20000710<br>20000822<br>20020222 |
| PRAI      | JP 1999-235216<br>JP 2000-200400<br>JP 2000-207841<br>JP 2000-207842<br>WO 2000-JP5588   | A<br>A<br>A<br>A<br>A1     | 19990823<br>20000703<br>20000710<br>20000710<br>20000821 |   |  |
| OS        | MARPAT 134:200564  |                            |  |   |  |
| AB        | The photopolymerizable compn. for a light-sensitive lithog.<br>original plate comprises a layer of contg.: (A) An ethylenic compd. (B) a<br>dye selected from the group consisting of the dyes, which each has a basic<br>structure comprising heteroatoms bonded to each other through a<br>polymethine chain and has a specific substituent on the polymethine chain |                            |  |   |  |

or on another basic structure; and (C) A photopolymer initiator on a support. The photopolymerizable compn. contg. the dye is highly sensitive to light not only in the visible region but in long-wavelength regions including the near IR region and not sensitive to light in the UV region and shows the excellent handling characteristics under daylight fluorescent lamps.

ST photopolymerizable compn lithog original plate

IT Dyes

(dye in photopolymerizable compn. for photopolymerizable lithog. original plate)

IT Light-sensitive materials

Lithographic plates

(photopolymerizable compn. for photopolymerizable lithog. original plate)

IT 328063-81-6 328063-88-3 328063-95-2 328064-01-3 328064-07-9

328064-13-7 328064-16-0 328064-20-6

RL: TEM (Technical or engineered material use); USES (Uses)

(dye in photopolymerizable compn. for photopolymerizable lithog. original plate)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Fuji Photo Film Co Ltd; JP 11119421 A 1999 CA

(2) Konica Corporation; JP 08114916 A 1996 CA

(3) Mitsubishi Chemical Corporation; JP 11119428 A 1999 CA

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(FILE 'HOME' ENTERED AT 16:12:39 ON 30 APR 2003)

FILE 'REGISTRY' ENTERED AT 16:12:51 ON 30 APR 2003

L1 12 S CARBOXYPHENOXYACETIC ACID  
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L7 1 S ANISIC ACID/CN  
L8 190 S CARBOXY AND ANISIC ACID  
L9 4 S RESORCINOL AND DIACETIC ACID  
L10 28918 S NAPHTHALENECARBOXYLIC ACID  
L11 6 S CARBOXYMETHYL AND THIO AND NAPHTHALENECARBOXYLIC ACID  
L12 0 S CARBOXYMETHYLTHIO ADJ BENZOIC ACID  
L13 18 S CARBOXYMETHYLTHIO AND BENZO?

FILE 'CA' ENTERED AT 16:23:05 ON 30 APR 2003

S 101714-12-9/REG#

FILE 'REGISTRY' ENTERED AT 16:23:09 ON 30 APR 2003

L14 1 S 101714-12-9/RN

FILE 'CA' ENTERED AT 16:23:09 ON 30 APR 2003

L15 2 S L14  
L16 62628 S PHOTO? AND (IR OR INFRARED OR INFRA RED)  
L17 34 S L16 AND CARBOXYMETHYL

FILE 'REGISTRY' ENTERED AT 16:26:23 ON 30 APR 2003

L18 0 S DIANISIDINE AND N AND TETRAACETIC ACID  
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L20 0 S DIANISIDINE AND ACETIC ACID  
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L23 7351 S N CARBOXYMETHYL AND GLYCINE  
L24 2193 S L23 AND PHENYL  
L25 28 S N CARBOXYMETHYL AND PHENYL GLYCINE

L26

1 S 1147-65-5

FILE 'CA' ENTERED AT 16:44:05 ON 30 APR 2003

L27 98 S L26  
L28 25 S L27 AND PHOTO?  
L29 1 S L28 AND (IR OR INFRARED OR INFRA RED)  
L30 24 S L28 NOT L29  
L31 565336 S IR OR INFRARED OR INFRA RED  
L32 954 S CARBOXYMETHYL AND L31  
L33 34 S L32 AND PHOTO?  
L34 0 S L33 AND LITHOGRAPH?  
L35 34 S L33 NOT L30  
E MUNNELLY H/IN  
L36 1 S E4  
E MUNNELLY H/AU  
L37 8 S E4-E6  
E WEST P/AU, IN  
L38 55 S E3-4  
E WEST PAUL/AU, IN  
L39 15 S E3-4  
L40 70 S L39 OR L38  
L41 5 S L40 AND (IR OR INFRARED OR INFRA RED)  
L42 1364 S LITHOGRAPH? AND (IR OR INFRARED OR INFRA RED)  
L43 827 S L42 AND PHOTO?  
L44 67 S L43 AND POLYMERIZ?  
L45 0 S CARBOXY AND METHYL AND L44  
L46 1 S L43 AND DAYLIGHT

=> s 143 and day light

443337 DAY  
780319 LIGHT  
339 DAY LIGHT  
(DAY(W) LIGHT)

L47 0 L43 AND DAY LIGHT

=> s 143 and photopolym?

22404 PHOTOPOLYM?  
L48 78 L43 AND PHOTOPOLYM?

=> d all 1-78

L48 ANSWER 1 OF 78 CA COPYRIGHT 2003 ACS  
AN 138:245659 CA  
TI Negative working lithographic printing plate master for digital  
direct platemaking by laser  
IN Taninaka, Hiromitsu  
PA Fuji Photo Film Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 15 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM G03F007-004  
ICS G03F007-004; G03F007-00; G03F007-029  
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reproductive Processes)  
FAN.CNT 1

|    | PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|----|---------------|------|----------|-----------------|----------|
| PI | JP 2003084432 | A2   | 20030319 | JP 2001-273784  | 20010910 |
|    | US 2003068575 | A1   | 20030410 | US 2002-236913  | 20020909 |

PRAI JP 2001-273784 A 20010910

AB The title printing plate master comprises on a support at least (A) an  
IR-absorbing agent, (B) an onium salt, (C) a radical polymerizable  
compd., (D) a binder polymer, and (E) an org. dye (precursor) capable of  
changing its color toner upon light-exposure.

ST lithog printing plate master neg working digital direct platemaking  
IT **Lithographic plates**  
(neg.-working presensitized; neg. working lithog. printing plate master  
for digital direct platemaking by laser)  
IT **Photoimaging materials**  
(photopolymerizable; neg. working lithog. printing plate  
master for digital direct platemaking by laser)  
IT 134127-48-3  
RL: TEM (Technical or engineered material use); USES (Uses)  
(IR absorbing agent; in photosensitive layer of  
neg. working lithog. printing plate master for digital direct  
platemaking by laser)  
IT 90216-38-9, Allyl methacrylate-methacrylic acid copolymer  
RL: TEM (Technical or engineered material use); USES (Uses)  
(binder polymer; in photosensitive layer of neg. working  
lithog. printing plate master for digital direct platemaking by laser)  
IT 29512-49-0, 3-Diethylamino-6-methyl-7-anilinofluoran  
RL: TEM (Technical or engineered material use); USES (Uses)  
(leuco dye; in photosensitive layer of neg. working lithog.  
printing plate master for digital direct platemaking by laser)  
IT 262612-33-9  
RL: TEM (Technical or engineered material use); USES (Uses)  
(onium salt; in photosensitive layer of neg. working lithog.  
printing plate master for digital direct platemaking by laser)  
IT 29570-58-9, Dipentaerythritol hexaacrylate  
RL: TEM (Technical or engineered material use); USES (Uses)  
(radical polymerizable compd.; in photosensitive layer of  
neg. working lithog. printing plate master for digital direct  
platemaking by laser)

L48 ANSWER 2 OF 78 CA COPYRIGHT 2003 ACS  
AN 138:245658 CA  
TI Positive-working **lithographic** printing plate master for  
IR laser direct digital platemaking  
IN Nakamura, Ippei; Oda, Akio  
PA Fuji Photo Film Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 33 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM G03F007-00  
ICS G03F007-004; G03F007-039; G03F007-40  
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reproductive Processes)

FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 2003084428  | A2   | 20030319 | JP 2001-277996  | 20010913 |
| PRAI | JP 2001-277996 |      | 20010913 |                 |          |

AB The title printing plate master comprises on a support (A) a water-insol.,  
alk.-sol. resin, (B) an IR absorbing agent, and (C) an ethylenic  
polymerizable compd. 0.1-20 %. The platemaking is carried out by an  
IR laser exposure, an alk.-development, and a heat treatment. The  
printing plate shows excellent printability.

ST lithog printing plate master pos working IR laser platemaking

IT **Photoimaging materials**  
(photopolymerizable; pos.-working lithog. printing plate  
master for IR laser direct digital platemaking)

IT **Lithographic plates**  
(presensitized, pos.-working; pos.-working lithog. printing plate  
master for IR laser direct digital platemaking)

IT 134127-48-3 449762-40-7  
RL: TEM (Technical or engineered material use); USES (Uses)  
(IR absorbing agent; in photosensitive layer of  
pos.-working lithog. printing plate master for IR laser

IT direct digital platemaking)  
 3524-66-1, NK Ester TMM 360 4986-89-4, NK Ester A TMMT 25852-49-7, NK  
 Ester 9PG  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (ethylenic polymerizable compd.; in photosensitive layer of  
 pos.-working lithog. printing plate master for IR laser  
 direct digital platemaking)  
 IT 141634-00-6, Acrylonitrile-methyl methacrylate-N-(p-  
 aminosulfonylphenyl)methacrylamide copolymer  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (water-insol., alk.-sol. resin; in photosensitive layer of  
 pos.-working lithog. printing plate master for IR laser  
 direct digital platemaking)

L48 ANSWER 3 OF 78 CA COPYRIGHT 2003 ACS  
 AN 138:245657 CA  
 TI Heat mode image recording material and positive-working  
 lithographic printing plate master for IR laser digital  
 direct platemaking  
 IN Nakamura, Ippei; Mitsumoto, Tomoyoshi  
 PA Fuji Photo Film Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 23 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM G03F007-00  
 ICS G03F007-004  
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)

| FAN.CNT 1           | PATENT NO. | KIND     | DATE           | APPLICATION NO. | DATE |
|---------------------|------------|----------|----------------|-----------------|------|
| PI JP 2003084427    | A2         | 20030319 | JP 2001-275055 | 20010911        |      |
| PRAI JP 2001-275055 |            | 20010911 |                |                 |      |

AB A heat mode image recording material comprises an IR absorbing  
 agent and .gtoreq.2 kinds of waxes and is imageable by an IR  
 laser exposure. The printing plate master comprises on a support an  
 IR-sensitive recording layer comprising (A) a water-insol.,  
 alk.-sol. resin, (B) an IR absorbing agent, and (C) .gtoreq.2  
 kinds of waxes. The printing plate master shows excellent scratch  
 resistance.  
 ST heat mode image recording material IR laser wax; lithog printing  
 plate pos working IR laser platemaking wax  
 IT Photoimaging materials  
 (photopolymerizable; heat mode image recording material and  
 pos.-working lithog. printing plate master for IR laser  
 digital direct platemaking)  
 IT Lithographic plates  
 (presensitized, pos.-working; heat mode image recording material and  
 pos.-working lithog. printing plate master for IR laser  
 digital direct platemaking)  
 IT 134127-48-3 449762-40-7  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (IR absorbing agent; in IR-sensitive recording  
 layer of pos.-working lithog. printing plate master for IR  
 laser digital direct platemaking)  
 IT 5303-25-3P, Dodecyl stearate 42232-29-1P, Dodecyl palmitate  
 RL: PNU (Preparation, unclassified); TEM (Technical or engineered material  
 use); PREP (Preparation); USES (Uses)  
 (wax; in IR-sensitive recording layer of pos.-working lithog.  
 printing plate master for IR laser digital direct  
 platemaking)  
 IT 123-28-4, Sumilizer TPL-R 693-36-7, Sumilizer TPS 16545-54-3,  
 Sumilizer TPM  
 RL: TEM (Technical or engineered material use); USES (Uses)

(wax; in IR-sensitive recording layer of pos.-working lithog.  
printing plate master for IR laser digital direct  
platemaking)

L48 ANSWER 4 OF 78 CA COPYRIGHT 2003 ACS  
AN 138:245647 CA  
TI Negative-working lithographic printing plate master suitable for  
direct laser platemaking  
IN Taninaka, Hiromitsu  
PA Fuji Photo Film Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 22 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM G03F007-11  
ICS B41N001-14; G03F007-00; G03F007-004; G03F007-027; G03F007-029;  
G03F007-032  
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)  
FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 2003084442  | A2   | 20030319 | JP 2001-273885  | 20010910 |
| PRAI | JP 2001-273885 |      | 20010910 |                 |          |

AB The title printing plate master comprises on a support a  
**photosensitive** layer comprised of (A) an IR absorbing  
agent, (B) an onium salt, (C) a radical polymerizable compd., and (D) a  
binder polymer, and an overcoat layer comprising (E) a water-sol.  
cellulose.  
ST lithog printing plate master neg working direct laser platemaking  
IT **Lithographic plates**  
(neg.-working presensitized; neg.-working lithog. printing plate master  
suitable for direct laser platemaking)  
IT **Photoimaging materials**  
(**photopolymerizable**; neg.-working lithog. printing plate  
master suitable for direct laser platemaking)  
IT 134127-48-3  
RL: TEM (Technical or engineered material use); USES (Uses)  
(IR absorbing agent; in **photosensitive** layer of  
neg.-working lithog. printing plate master suitable for direct laser  
platemaking)  
IT 90216-38-9, Allyl methacrylate-methacrylic acid copolymer  
RL: TEM (Technical or engineered material use); USES (Uses)  
(binder polymer; in **photosensitive** layer of neg.-working  
lithog. printing plate master suitable for direct laser platemaking)  
IT 262612-33-9  
RL: TEM (Technical or engineered material use); USES (Uses)  
(onium salt; in **photosensitive** layer of neg.-working lithog.  
printing plate master suitable for direct laser platemaking)  
IT 29570-58-9, Dipentaerythritol hexaacrylate  
RL: TEM (Technical or engineered material use); USES (Uses)  
(polymerizable compd.; in **photosensitive** layer of  
neg.-working lithog. printing plate master suitable for direct laser  
platemaking)  
IT 9004-32-4, Cellogen 5A  
RL: TEM (Technical or engineered material use); USES (Uses)  
(water-sol. cellulose; in overcoat layer of neg.-working lithog.  
printing plate master suitable for direct laser platemaking)

L48 ANSWER 5 OF 78 CA COPYRIGHT 2003 ACS  
AN 138:245631 CA  
TI **Photopolymerizable** composition  
IN Yanaka, Hiromitsu  
PA Fuji Photo Film Co., Ltd., Japan  
SO Eur. Pat. Appl., 30 pp.

DT CODEN: EPXXDW  
 LA Patent  
 LA English  
 IC ICM G03F007-029  
 ICS B41C001-10  
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 35, 38

FAN.CNT 1

|      | PATENT NO.  | KIND  | DATE               | APPLICATION NO. | DATE     |
|------|---|---|--------------------|-----------------|----------|
| PI   | EP 1291718  | A2  | 20030312           | EP 2002-20417   | 20020911 |
|      | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK   |   |                    |                 |          |
| PRAI | JP 2001-275072  | A   | 20010911           |                 |          |
| AB   | The present invention relates to a photopolymerizable compn. for neg.-working lithog. printing plate which comprises (A) a polymerizable compd. having at least one radical-polymerizable ethylenically unsatd. double bond per mol. and a cohesive energy d. of not smaller than 500 J/cm <sup>3</sup> , (B) a radical polymn. initiator and (C) a binder polymer and cures when exposed to light. |   |                    |                 |          |
| ST   | lithog printing plate photopolymerizable compn  |   |                    |                 |          |
| IT   | Lithographic plates<br>(neg.-working presensitized; photopolymerizable compn. for)  |   |                    |                 |          |
| IT   | Photoimaging materials<br>(photopolymerizable; photopolymerizable compn. for neg.-working lithog. printing plates)  |   |                    |                 |          |
| IT   | 385843-65-2   | 501332-52-1                                   |                    |                 |          |
|      | RL: TEM (Technical or engineered material use); USES (Uses)<br>(IR absorbent; photopolymerizable compn. for neg.-working lithog. printing plates)   |   |                    |                 |          |
| IT   | 501332-57-6P  | 501332-58-7P                                  |                    |                 |          |
|      | RL: POF (Polymer in formulation); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)<br>(binder; photopolymerizable compn. for neg.-working lithog. printing plates)  |   |                    |                 |          |
| IT   | 90216-38-9  | Allyl methacrylate-methacrylic acid copolymer | 501347-46-2        |                 |          |
|      | RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)<br>(binder; photopolymerizable compn. for neg.-working lithog. printing plates)   |   |                    |                 |          |
| IT   | 109479-99-4   | 168203-58-5                                   | 501332-54-3        | 501332-56-5     |          |
|      | RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)<br>(photopolymerizable compn. for neg.-working lithog. printing plates)   |   |                    |                 |          |
| IT   | 377780-83-1   |   |                    |                 |          |
|      | RL: CAT (Catalyst use); USES (Uses)<br>(polymn. initiator; photopolymerizable compn. for neg.-working lithog. printing plates)  |   |                    |                 |          |
| L48  | ANSWER 6 OF 78  | CA  | COPYRIGHT 2003 ACS |                 |          |
| AN   | 138:137956  | CA  |                    |                 |          |
| TI   | Tailor-made polymers for laser ablation   |   |                    |                 |          |
| AU   | Lippert, Thomas; David, Christian; Hauer, Marc; Phipps, Claude; Wokaun, Alexander   |   |                    |                 |          |
| CS   | Paul Scherrer Institut, Villigen PSI, 5232, Switz.  |   |                    |                 |          |
| SO   | Reza Kenkyu (2001), 29(11), 734-738   |   |                    |                 |          |
|      | CODEN: REKEDA; ISSN: 0387-0200  |   |                    |                 |          |
| PB   | Reza Gakkai   |   |                    |                 |          |
| DT   | Journal   |   |                    |                 |          |
| LA   | English   |   |                    |                 |          |
| CC   | 37-5 (Plastics Manufacture and Processing)  |   |                    |                 |          |
|      | Section cross-reference(s): 73  |   |                    |                 |          |
| AB   | Photopolymers based on triazene-groups were designed for UV   |   |                    |                 |          |

laser ablation. The tested triazene-polymer reveals a low threshold fluence and unusually high ablation rates at low and high fluences. The polymer decomp. into gaseous products, resulting in clean ablation structures without surface contaminations. The triazene-polymer was also tested for two different applications at two different irradn. wavelengths, i.e. in the UV (308 nm) and in the near-IR (935 nm). Diffractive gray tone phase masks optimized for laser ablation were applied to fabricate microoptical elements. The triazene-polymer reveals also superior properties for applications in the near-IR. Near-IR irradn. is used to create a plasma which could be used as thruster for microsatellites. The carbon-doped triazene-polymer shows higher values of the momentum coupling coeff. and specific impulse than a com. polymer. The well-defined threshold for the max. momentum coupling coeff. was only obsd. for the designed polymer.

ST triazene photopolymer laser ablation microoptic phase mask  
plasma thruster

IT Carbon black, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(Ketjen Black, triazene photopolymer doped with; design and properties of triazene photopolymer for laser ablation)

IT Laser ablation  
Optical materials  
Photomasks (lithographic masks)  
Polymer morphology  
(design and properties of triazene photopolymer for laser ablation)

IT Polyethers, properties  
RL: CPS (Chemical process); DEV (Device component use); PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process); USES (Uses)  
(polyamine-, carbon black-doped; design and properties of triazene photopolymer for laser ablation)

IT Polyamines  
RL: CPS (Chemical process); DEV (Device component use); PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process); USES (Uses)  
(polyether-, carbon black-doped; design and properties of triazene photopolymer for laser ablation)

IT 148030-84-6  
RL: CPS (Chemical process); DEV (Device component use); PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); PROC (Process); USES (Uses)  
(carbon black-doped; design and properties of triazene photopolymer for laser ablation)

RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD

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Journal, in press 2001

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- (30) Yeh, J; Proc SPIE 1988, V922, P461 CA

L48 ANSWER 7 OF 78 CA COPYRIGHT 2003 ACS

AN 138:63872 CA

TI Method for **lithographic** printing using printing plates  
regeneratable on printer rollers

IN Urano, Toshiyoshi; Uematsu, Takuya; Mizuho, Yuji; Tabuchi, Mitsuru

PA Mitsubishi Chemical Corp., Japan; Mitsubishi Heavy Industries, Ltd.

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM B41F007-02

ICS G03F007-00; G03F007-16; G03F007-20

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)

FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 2003001789  | A2   | 20030108 | JP 2001-190836  | 20010625 |
| PRAI | JP 2001-190836 |      | 20010625 |                 |          |

AB The process is carried out using a printer which comprises (A) a printer roller onto which **photosensitive** layer is formed by supplying a **photopolymerizable** compn., (B) a laser beam source for exposure of the **photosensitive** layer, (C) a means for formation of images on the printing plate layer, (D) a means for printing by feeding inks and wetting water onto the roller, and (E) a means for removing the image-formed printing plate layer after the printing process is finished. Prepn. and removal of the printing plate are both carried out within the printing app. Preferably, the **photopolymerizable** compn. is sensitive against near IR laser of 800-1300 nm or of blue-purple laser of 400-430 nm.

ST lithog app printing plate prep removal; printing plate regenerative  
lithog app

IT **Lithographic** plates

(lithog. printers with in-printer prep. and removal of printing plates  
for their regeneration)

IT **Photoimaging** materials

(**photopolymerizable**; lithog. printers with in-printer prep.  
and removal of printing plates for their regeneration)

IT 29570-58-9 32435-46-4 56361-55-8 60506-81-2 77001-81-1  
RL: CPS (Chemical process); PEP (Physical, engineering or chemical  
process); TEM (Technical or engineered material use); PROC (Process); USES  
(Uses)

(**photopolymerizable** compn.; lithog. printers with in-printer  
prep. and removal of printing plates for their regeneration)

L48 ANSWER 8 OF 78 CA COPYRIGHT 2003 ACS

AN 137:391108 CA

TI Method for image formation with IR on **lithographic**  
printing plate precursor under humidity controlled conditions

IN Okamoto, Hideaki

PA Mitsubishi Chemical Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 16 pp.

CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM G03F007-11  
ICS B41N001-14; G03B027-32; G03F007-00  
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 2002341547  | A2   | 20021127 | JP 2001-144597  | 20010515 |
| PRAI | JP 2001-144597 |      | 20010515 |                 |          |

AB The title method for image formation on a light-sensitive image-forming material, which has an IR-sensitive layer made of a photopolymerizable compn., and an oxygen-blocking layer contg. a water-sol. polymer on a support includes the steps of handling the image-forming material before and after the explosion under yellow or white light under  $\text{Itoreq.} 10\%$  relative humidity. The method provides the good image quality.

ST image IR humidity controlled lithog printing plate precursor

IT Light-sensitive materials

(IR-sensitive; method for image formation with IR on lithog. printing plate precursor)

IT Humidity

Lithographic plates

(method for image formation with IR on lithog. printing plate precursor)

IT Photoimaging materials

(photopolymerizable; method for image formation with IR on lithog. printing plate precursor)

L48 ANSWER 9 OF 78 CA COPYRIGHT 2003 ACS

AN 137:286466 CA

TI IR laser-sensitive lithographic plate characterized by support having smut

IN Okamoto, Hideaki

PA Mitsubishi Chemical Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 16 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM B41N001-08

ICS B41N003-03; B41N003-04; C25F003-04; G03F007-00; G03F007-038; G03F007-09

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38, 56

FAN.CNT 1

|      | PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|------|---------------|------|----------|-----------------|----------|
| PI   | JP 2002283752 | A2   | 20021003 | JP 2001-82735   | 20010322 |
| PRAI | JP 2001-82735 |      | 20010322 |                 |          |

AB The lithog. plate has a photopolymerizable compn., which is exposed to or scanned by IR laser, on a support having 0.2-6.0 mg/dm<sup>2</sup> smut on the surface. Preferably, the photopolymerizable compn. contains a polymer binder substituted with addn.-polymerizable ethylenic unsatd. groups on branches. The plate shows enhanced adhesion between the support and the photosensitive layer due to hydrophilicity of the support owing to the smut. The lithog. plate shows prevention of banding and prevention of scattering of the photopolymerizable compn. under IR laser irradn.

ST IR laser sensitive lithog plate; aluminum support smut laser lithog plate; adhesion support photosensitive layer lithog plate

IT IR lasers

Lithographic plates

(IR laser-sensitive lithog. plate showing enhanced adhesion between **photosensitive** layer and support having smut)

IT Anodization  
 (IR laser-sensitive lithog. plate showing enhanced adhesion between **photosensitive** layer and support with smut formed before)

IT Etching  
 (electrochem., surface roughening; IR laser-sensitive lithog. plate showing enhanced adhesion between **photosensitive** layer and support with smut formed after)

IT Scale (deposits)  
 (smut; IR laser-sensitive lithog. plate showing enhanced adhesion between **photosensitive** layer and support having smut)

IT 464924-19-4P  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (binder; in IR laser-sensitive lithog. plate showing enhanced adhesion between **photosensitive** layer and support having smut)

IT 32435-46-4 64401-02-1 77001-81-1  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (in IR laser-sensitive lithog. plate showing enhanced adhesion between **photosensitive** layer and support having smut)

IT 3584-23-4  
 RL: CAT (Catalyst use); USES (Uses)  
 (photopolymer. initiator; in IR laser-sensitive lithog. plate showing enhanced adhesion between **photosensitive** layer and support having smut)

IT 425380-40-1  
 RL: CAT (Catalyst use); USES (Uses)  
 (sensitizer; in IR laser-sensitive lithog. plate showing enhanced adhesion between **photosensitive** layer and support having smut)

IT 7429-90-5, Aluminum, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (support; IR laser-sensitive lithog. plate showing enhanced adhesion between **photosensitive** layer and support having smut)

L48 ANSWER 10 OF 78 CA COPYRIGHT 2003 ACS  
 AN 137:286465 CA  
 TI IR laser-sensitive lithographic plate characterized by optical reflection of support  
 IN Okamoto, Hideaki  
 PA Mitsubishi Chemical Corp., Japan  
 SO Jpn. Kokai Tokkyo Koho, 16 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM B41N001-08  
 ICS B41N003-03; B41N003-04; C25D011-04; C25D011-16; G03F007-00;  
 G03F007-09  
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 38, 56

FAN.CNT 1

|      | PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|------|---------------|------|----------|-----------------|----------|
| PI   | JP 2002283751 | A2   | 20021003 | JP 2001-82734   | 20010322 |
| PRAI | JP 2001-82734 |      | 20010322 |                 |          |

AB The lithog. plate has a photopolymerizable compn., which is exposed to or scanned by IR laser, formed on a support having optical reflection d.  $\geq 0.30$ . Alternatively, the support is that

obtained from an Al plate by surface-roughening and anodizing wherein A - B .ltoreq. 0.1 is satisfied (A = optical reflection d. just after surface roughening; B = optical reflection d. after anodization). Preferably, the **photopolymerizable** compn. contains a polymer binder substituted with addn.-polymerizable ethylenic unsatd. groups on branches. The lithog. plate shows prevention of banding and prevention of scattering of the **photosensitive** compn. under **IR** laser irradn.

**ST** **IR** laser sensitive lithog plate support; optical reflection density support lithog plate; aluminum surface roughening lithog plate support; anodized aluminum support optical density regulation

**IT** **IR** lasers  
**Lithographic plates**  
 (IR laser-sensitive lithog. plate supported by substrate with regulated optical reflection d.)

**IT** Anodization  
 (IR laser-sensitive lithog. plate supported by substrate with regulated optical reflection d. after)

**IT** Etching  
 (electrochem., for surface roughening; IR laser-sensitive lithog. plate supported by substrate with regulated optical reflection d. after)

**IT** 7429-90-5, Aluminum, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (IR laser-sensitive lithog. plate supported by substrate with regulated optical reflection d.)

**IT** 464924-19-4P  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (binder; in IR laser-sensitive lithog. plate supported by substrate with regulated optical reflection d.)

**IT** 32435-46-4 64401-02-1 77001-81-1  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (in IR laser-sensitive lithog. plate supported by substrate with regulated optical reflection d.)

**IT** 3584-23-4  
 RL: CAT (Catalyst use); USES (Uses)  
 (photopolymer. initiator; in IR laser-sensitive lithog. plate supported by substrate with regulated optical reflection d.)

**IT** 425380-40-1  
 RL: CAT (Catalyst use); USES (Uses)  
 (sensitizer; in IR laser-sensitive lithog. plate supported by substrate with regulated optical reflection d.)

**L48** ANSWER 11 OF 78 CA COPYRIGHT 2003 ACS  
**AN** 137:270576 CA  
**TI** **photosensitive** lithog. printing plate using **IR** laser  
**IN** Okamoto, Hideaki  
**PA** Mitsubishi Chemical Corp., Japan  
**SO** Jpn. Kokai Tokkyo Koho, 14 pp.  
**CODEN**: JKXXAF  
**DT** Patent  
**LA** Japanese  
**IC** ICM G03F007-26  
 ICS C08F002-44; C08F002-50; C08F291-00; G03F007-00; G03F007-029;  
 G03F007-031; G03F007-40  
**CC** 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
**FAN.CNT 1**

|      | PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE     |
|------|--|------|----------|-----------------|----------|
| PI   | JP 2002278080  | A2   | 20020927 | JP 2001-77681   | 20010319 |
| PRAI | JP 2001-77681  |      | 20010319 |                 |          |
| AB   | Title plate with no picture unevenness and having good washing resistance comprises a <b>photopolymerizable</b> component layer on a support |      |          |                 |          |

layer, wherein the **photosensitive** layer has a step clear  
.1 to req. 6 after 650 nm-1300 nm multi-beam light exposure and image development. The **photosensitive** layer comprises an ethylene type unsatd. compd., a **photosensitizing** compd. capable of absorbing 650-1300 nm light, a **photopolymer**. catalyst, and a polymer material.

ST IR laser **photosensitive** lithog printing plate  
IT IR lasers  
    **Lithographic** plates  
        (**photosensitive** lithog. printing plate using **IR**  
          laser)  
IT 3584-23-4, 2-(*p*-Methoxyphenyl)-4,6-bis(trichloromethyl)-*s*-triazine  
425380-40-1  
RL: CAT (Catalyst use); USES (Uses)  
    (**photosensitive** lithog. printing plate using **IR**  
          laser)  
IT 132011-04-2 462109-31-5  
RL: TEM (Technical or engineered material use); USES (Uses)  
    (**photosensitive** lithog. printing plate using **IR**  
          laser)

L48 ANSWER 12 OF 78 CA COPYRIGHT 2003 ACS  
AN 137:270569 CA  
TI Method for **lithographic** printing plate imaging  
IN Okamoto, Hideaki  
PA Mitsubishi Chemical Corporation, Japan  
SO Eur. Pat. Appl., 24 pp.  
CODEN: EPXXDW  
DT Patent  
LA English  
IC ICM B41C001-10  
      ICS B41M005-36  
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other  
      Reproductive Processes)  
Section cross-reference(s) : 38

FAN.CNT 1

|      | PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE     |
|------|--|------|----------|-----------------|----------|
| PI   | EP 1243412   | A1   | 20020925 | EP 2002-5870    | 20020314 |
|      | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,<br>IE, SI, LT, LV, FI, RO, MK, CY, AL, TR |      |          |                 |          |
|      | JP 2002278088  | A2   | 20020927 | JP 2001-77682   | 20010319 |
|      | US 2002177071  | A1   | 20021128 | US 2002-98598   | 20020318 |
| PRAI | JP 2001-77682  | A    | 20010319 |                 |          |

AB Disclosed is a method for lithog. printing plate imaging, which comprises subjecting a **photosensitive** layer of a **photosensitive** lithog. printing plate having a **photosensitive** layer comprising a **photopolymerizable** compn. formed on a support surface to scanning exposure with a laser light having a wavelength in a range of from 650 to 1,300 nm, developing an image, and then further subjecting the **photosensitive** lithog. printing plate having the developed image to whole image exposure with a light exposure energy of 1-70 times larger than the light exposure energy at the time of the laser light scanning exposure. According to the present invention, a sufficient image strength with satisfactory printing resistance and excellent reproducibility of an image can be obtained.

ST lithog printing plate **IR** imaging method  
IT **Lithographic** plates  
    (method for lithog. printing plate imaging)  
IT 204141-64-0, 3,4-Epoxyhexylmethyl acrylate-methyl methacrylate copolymer  
RL: TEM (Technical or engineered material use); USES (Uses)  
    (binder; method for lithog. printing plate imaging)  
IT 32435-46-4 56361-55-8 77001-81-1  
RL: TEM (Technical or engineered material use); USES (Uses)

(photopolymerizable material; method for lithog. printing plate imaging)  
 IT 3584-23-4, 2-(p-Methoxyphenyl)-4,6-bis(trichloromethyl)-s-triazine  
 RL: CAT (Catalyst use); TEM (Technical or engineered material use); USES (Uses)  
 (photopolymer. initiator; method for lithog. printing plate imaging)  
 IT 425380-40-1  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (sensitizing dye; method for lithog. printing plate imaging)  
 RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD  
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 (2) Anon; PATENT ABSTRACTS OF JAPAN 2000, V2000(06)  
 (3) Anon; PATENT ABSTRACTS OF JAPAN 2001, V2000(12)  
 (4) Anon; PATENT ABSTRACTS OF JAPAN 2001, V2000(23)  
 (5) Aoyama, T; US 6010824 A 2000 CA  
 (6) Fuji Photo Film Co Ltd; JP 2000066416 A 2000 CA  
 (7) Fuji Photo Film Co Ltd; JP 2000089478 A 2000 CA  
 (8) Fuji Photo Film Co Ltd; JP 2000267266 A 2000 CA  
 (9) Fuji Photo Film Co Ltd; JP 2001154374 A 2001 CA  
 (10) Mitsubishi Chem Corp; JP 11265069 A 1999 CA  
 (11) Mitsubishi Chem Corp; JP 2001042546 A 2001 CA  
  
 L48 ANSWER 13 OF 78 CA COPYRIGHT 2003 ACS  
 AN 137:224178 CA  
 TI Negative working lithographic printing plate master suitable for direct digital platemaking by IR laser  
 IN Aoshima, Keitaro  
 PA Fuji Photo Film Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 22 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM G03F007-00  
 ICS B41N001-14; G03F007-11  
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 FAN.CNT 1  

|      | PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE     |
|------|--|------|----------|-----------------|----------|
| PI   | JP 2002258467  | A2   | 20020911 | JP 2001-61475   | 20010306 |
|      | US 2002189476  | A1   | 20021219 | US 2002-87834   | 20020305 |
| PRAI | JP 2001-61475  | A    | 20010306 |                 |          |
| AB   | The title lithog. printing plate master comprises a support, an alkali-developable photosensitive layer contg. a photothermal conversion material and crosslinkable/polymerizable compd., and an overcoat layer contg. a hydrophobic, alkali-sol. polymer. The printing plate master shows improved IR laser sensitivity, suppressed ablation of the photosensitive layer, and improved ink reception. |      |          |                 |          |
| ST   | lithog printing plate master neg working direct digital platemaking; IR laser direct digital platemaking lithog printing plate master  |      |          |                 |          |
| IT   | Fluoropolymers, uses<br>RL: DEV (Device component use); USES (Uses)<br>(in alkali-developable photosensitive layer of neg. working lithog. printing plate master suitable for direct digital platemaking by IR laser)  |      |          |                 |          |
| IT   | Lithographic plates<br>(neg. working lithog. printing plate master suitable for direct digital platemaking by IR laser)  |      |          |                 |          |
| IT   | Photoimaging materials<br>(photopolymerizable; neg. working lithog. printing plate master suitable for direct digital platemaking by IR laser)   |      |          |                 |          |
| IT   | 134127-48-3  |      |          |                 |          |

RL: DEV (Device component use); USES (Uses)  
     (IR absorber; in alkali-developable **photosensitive**  
     layer of neg. working lithog. printing plate master suitable for direct  
     digital platemaking by **IR** laser)  
 IT 28854-56-0, Styrene-p-vinylbenzoic acid copolymer 457625-40-0, Ethyl  
     methacrylate-monoacryloyloxyethyl succinate copolymer  
 RL: DEV (Device component use); USES (Uses)  
     (hydrophobic alkali-sol.; in overcoat layer of neg. working lithog.  
     printing plate master suitable for direct digital platemaking by  
     **IR** laser)  
 IT 85-43-8, Tetrahydrophthalic acid anhydride 104-15-4, p-Toluene sulfonic  
     acid, uses 27029-76-1, m-Cresol-p-cresol-formaldehyde copolymer  
 29570-58-9, Dipentaerythritol hexaacrylate 90216-38-9, Allyl  
     methacrylate-methacrylic acid copolymer 207793-01-9  
 RL: DEV (Device component use); USES (Uses)  
     (in alkali-developable **photosensitive** layer of neg. working  
     lithog. printing plate master suitable for direct digital platemaking  
     by **IR** laser)  
 IT 124996-93-6P, Acrylonitrile-N-(p-aminosulfonylphenyl)methacrylamide-ethyl  
     methacrylate copolymer  
 RL: DEV (Device component use); SPN (Synthetic preparation); PREP  
     (Preparation); USES (Uses)  
     (in alkali-developable **photosensitive** layer of neg. working  
     lithog. printing plate master suitable for direct digital platemaking  
     by **IR** laser)  
 IT 19600-49-8, Triphenylsulfonium acetate  
 RL: DEV (Device component use); USES (Uses)  
     (onium salt; in alkali-developable **photosensitive** layer of  
     neg. working lithog. printing plate master suitable for direct digital  
     platemaking by **IR** laser)

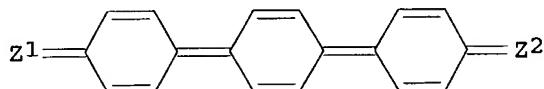
L48 ANSWER 14 OF 78 CA COPYRIGHT 2003 ACS  
 AN 137:224144 CA  
 TI Negative image forming material suitable for manufacturing  
     **lithographic** printing plate for heat mode exposure  
 IN Fujimaki, Kazuhiro; Sorori, Tadahiro  
 PA Fuji Photo Film Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 47 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM G03F007-038  
 ICS B41N001-14; C08F002-48; C08F290-14; G03F007-00; G03F007-004;  
     G03F007-028; B41C001-055  
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other  
     Reprographic Processes)  
     Section cross-reference(s): 38

| FAN.CNT 1 | PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE     |
|-----------|--|------|----------|-----------------|----------|
| PI        | JP 2002251008  | A2   | 20020906 | JP 2001-48827   | 20010223 |
|           | US 2002182539  | A1   | 20021205 | US 2002-80654   | 20020225 |
| PRAI      | JP 2001-48827  | A    | 20010223 |                 |          |
| AB        | The invention relates to a neg. working polymerizable imaging material suitable for manufg. a heat mode-type lithog. printing plate, wherein the imaging material comprises (1) alk.-sol. polyurethane contg. a side chain(s) selected from -X-C(O)C(R1):C(R2)R3, -Y-C(R4)(R5)-C(R6):C(R7)R8, and -Z-C(R9):C(R10)R11 [R1-11 = monovalent org. group; X, Y = O, S, -N(R12)-; Z = O, S, -N(R13)-, phenylene; R12, R13 = H, monovalent org. group], (2) photothermal conversion agents (or IR absorbing dyes), and (3) radical generation compds. (or polymn. initiators) upon heat mode irradn., and optionally (4) radical polymerizable compds. The lithog. printing plate shows excellent printability. |      |          |                 |          |
| ST        | heat mode neg imaging material lithog printing plate polyurethane  |      |          |                 |          |

IT **Lithographic plates**  
     (neg.-working presensitized; neg. image forming material suitable for  
         manufg. lithog. printing plate for heat mode exposure)  
 IT **Photoimaging materials**  
     (photopolymerizable; neg. image forming material suitable for  
         manufg. lithog. printing plate for heat mode exposure)  
 IT **Polyurethanes, preparation**  
     RL: SPN (Synthetic preparation); TEM (Technical or engineered material  
         use); PREP (Preparation); USES (Uses)  
         (prepn. of polyurethane for neg. working polymerizable material  
             suitable for lithog. printing platemaking)  
 IT 193687-61-5 401903-29-5  
     RL: TEM (Technical or engineered material use); USES (Uses)  
         (IR absorbing dye in neg. working polymerizable material  
             suitable for lithog. printing platemaking)  
 IT 66003-78-9 377780-83-1  
     RL: TEM (Technical or engineered material use); USES (Uses)  
         (polymn. initiator in neg. working polymerizable material suitable for  
             lithog. printing platemaking)  
 IT 455923-08-7P 455923-09-8P 455923-11-2P 455923-13-4P 455923-15-6P  
     455923-16-7P 455923-17-8P 455923-19-0P 455923-20-3P 455923-21-4P  
     455923-22-5P 455923-23-6P 455923-24-7P 455923-25-8P 455923-26-9P  
     455923-28-1P 455923-30-5P 455923-32-7P 455923-34-9P 455923-36-1P  
     455923-37-2P 455923-38-3P 455923-39-4P 455923-40-7P 455923-41-8P  
     455923-42-9P 455923-43-0P 455923-44-1P  
     RL: SPN (Synthetic preparation); TEM (Technical or engineered material  
         use); PREP (Preparation); USES (Uses)  
         (prepn. of polyurethane for neg. working polymerizable material  
             suitable for lithog. printing platemaking)  
 IT 29570-58-9, Dipentaerythritol hexaacrylate 455923-45-2 455923-46-3  
     RL: TEM (Technical or engineered material use); USES (Uses)  
         (radical polymerizable compd. in neg. working polymerizable material  
             suitable for lithog. printing platemaking)

L48 ANSWER 15 OF 78 CA COPYRIGHT 2003 ACS  
 AN 137:208399 CA  
 TI IR-laser sensitive material composition containing specific  
     aromatic cyano compound suitable for pattern formation on substrate such  
     as **lithographic printing plate, semiconductor device fabrication**  
 IN Takasaki, Ryuichiro  
 PA Mitsubishi Chemical Corp., Japan  
 SO Jpn. Kokai Tokkyo Koho, 23 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM G03F007-031  
     ICS C08F002-50; G03F007-027; G03F007-029  
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other  
     Reprographic Processes)  
     Section cross-reference(s): 76  
 FAN.CNT 1  

|      | PATENT NO.        | KIND | DATE     | APPLICATION NO. | DATE     |
|------|-------------------|------|----------|-----------------|----------|
| PI   | JP 2002244290     | A2   | 20020830 | JP 2001-39866   | 20010216 |
| PRAI | JP 2001-39866     |      | 20010216 |                 |          |
| OS   | MARPAT 137:208399 |      |          |                 |          |
| GI   |                   |      |          |                 |          |



AB The title compn. contains ethylenic unsatd. compds., a photopolymer . initiator, and a sensitizing dye, wherein arom. cyano compd. I ( Z1-2 = dicyanomethylidene, O) is added in the compn. The compn. shows the high IR-sensitivity and is handled under white light.

ST IR sensitive compn pattern lithog printing plate semiconductor device

IT **Lithographic plates**  
Semiconductor device fabrication  
(IR-laser sensitive material compn. suitable for pattern formation on substrate such as lithog. printing plate, semiconductor device fabrication)

IT Light-sensitive materials  
(IR; IR-laser sensitive material compn. suitable for pattern formation on substrate such as lithog. printing plate, semiconductor device fabrication)

IT 121286-30-4 452322-87-1  
RL: TEM (Technical or engineered material use); USES (Uses)  
(arom. cyano compd. in IR-laser sensitive material compn.)

L48 ANSWER 16 OF 78 CA COPYRIGHT 2003 ACS  
 AN 137:101449 CA  
 TI Photopolymerizable compositions for near IR laser exposure and lithographic plates using them with excellent sensitivity and storage stability  
 IN Tsurutani, Yasuyuki; Toshimitsu, Eriko  
 PA Mitsubishi Chemical Corp., Japan  
 SO Jpn. Kokai Tokkyo Koho, 27 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM G03F007-004  
 ICS G03F007-004; B41N001-14; G03F007-00; G03F007-029  
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

| FAN.CNT 1            | PATENT NO.  | KIND     | DATE          | APPLICATION NO. | DATE |
|----------------------|---|----------|---------------|-----------------|------|
| PI JP 2002202592     | A2  | 20020719 | JP 2001-75248 | 20010316        |      |
| PRAI JP 2000-324902  | A   | 20001025 |               |                 |      |
| OS MARPAT 137:101449 |   |          |               |                 |      |
| AB                   | The compns. contain ethylenic monomers, photopolymer. initiators (consisting of sensitizing dyes and radical generators, preferably) generating radicals by light with wavelength 600-1300 nm, and amine compds. having at. groups NCH <sub>2</sub> . |          |               |                 |      |
| ST                   | near IR laser exposure photopolymerizable compn lithog; lithog printing plate storage stability benzylamine; phthalocyanine sensitizer radical generator photopolymer sensitivity   |          |               |                 |      |
| IT                   | <b>Lithographic plates</b><br><b>Photoimaging materials</b><br>(amine-contg. photopolymerizable compns. for lithog. plates with good near IR laser sensitivity and storage stability)   |          |               |                 |      |
| IT                   | Amines, uses<br>RL: TEM (Technical or engineered material use); USES (Uses)<br>(amine-contg. photopolymerizable compns. for lithog. plates  |          |               |                 |      |

with good near IR laser sensitivity and storage stability)

IT Polymerization catalysts  
 (photopolym.; amine-contg. photopolymerizable compns. for lithog. plates with good near IR laser sensitivity and storage stability)

IT Cyanine dyes  
 (sensitizing dye; amine-contg. photopolymerizable compns. for lithog. plates with good near IR laser sensitivity and storage stability)

IT 259133-57-8  
 RL: CAT (Catalyst use); USES (Uses)  
 (amine-contg. photopolymerizable compns. for lithog. plates with good near IR laser sensitivity and storage stability)

IT 121-44-8, Triethylamine, uses 620-40-6, Tribenzylamine  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (amine-contg. photopolymerizable compns. for lithog. plates with good near IR laser sensitivity and storage stability)

IT 168112-77-4, Methacrylic acid-methyl methacrylate copolymer ester with (3,4-epoxycyclohexyl)methyl methacrylate 220171-03-9,  
 Acrylonitrile-2-hydroxy-3-allyloxypropyl methacrylate-methacrylic acid-vinyl methacrylate copolymer  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (binder; amine-contg. photopolymerizable compns. for lithog. plates with good near IR laser sensitivity and storage stability)

IT 4986-89-4 32435-46-4 77001-81-1  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (monomer; amine-contg. photopolymerizable compns. for lithog. plates with good near IR laser sensitivity and storage stability)

IT 290-87-9D, s-Triazine, derivs. 3584-23-4, 2-(4-Methoxyphenyl)-4,6-bis(trichloromethyl)-s-triazine 191726-43-9  
 RL: CAT (Catalyst use); USES (Uses)  
 (radical generator; amine-contg. photopolymerizable compns. for lithog. plates with good near IR laser sensitivity and storage stability)

IT 328063-81-6  
 RL: CAT (Catalyst use); USES (Uses)  
 (sensitizing dye; amine-contg. photopolymerizable compns. for lithog. plates with good near IR laser sensitivity and storage stability)

IT 574-93-6, Phthalocyanine  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (sensitizing dye; amine-contg. photopolymerizable compns. for lithog. plates with good near IR laser sensitivity and storage stability)

L48 ANSWER 17 OF 78 CA COPYRIGHT 2003 ACS

AN 137:85964 CA

TI Photopolymerizable compositions containing cyanine compounds as sensitizers and lithographic plates using them

IN Urano, Toshiyoshi

PA Mitsubishi Chemical Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

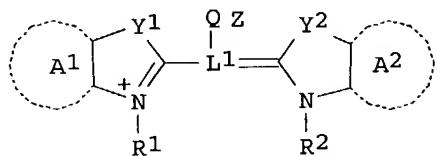
IC ICM G03F007-004

ICS B41N001-14; C08F002-50; G03F007-00; G03F007-028; G03F007-029

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

|       | PATENT NO.    | KIND  | DATE     | APPLICATION NO. | DATE     |
|-------|---------------|-------|----------|-----------------|----------|
| ----- | -----         | ----- | -----    | -----           | -----    |
| PI    | JP 2002189291 | A2    | 20020705 | JP 2000-390192  | 20001222 |



Xa-

I

AB The compns. contain (A) ethylenically-unsatd. compds., (B) sensitizers I [Y<sub>1</sub>, Y<sub>2</sub> = S, O, dialkylmethylene; A<sub>1</sub>, A<sub>2</sub> = (un)substituted benzene ring, (un)substituted naphthalene ring; R<sub>1</sub>, R<sub>2</sub> = (un)substituted alkyl, (un)substituted aryl, (un)substituted aralkyl; L<sub>1</sub> = (un)substituted heptamethine; Q = O, S; Z = (un)substituted tetrazolyl; Xa- = counter anion], and (c) photoinitiators. The lithog. plate comprises a support and a layer of the compns. The compns. are sensitive to visible light esp. near-IR and are not sensitive to UV light, so the lithog. plate can be handled under a white fluorescent lamp.

ST photopolymerizable compn cyanine sensitizer presensitized lithog plate; tetrazolyl cyanine compd sensitizer presensitized lithog plate; near IR sensitive lithog plate cyanine dye sensitizer

IT Cyanine dyes  
(photopolymerizable compns. contg. cyanine compds. having tetrazolyl group as sensitizers for near-IR-sensitive lithog. plates)

IT Polymerization catalysts  
(photopolym.; photopolymerizable compns. contg. cyanine compds. having tetrazolyl group as sensitizers for near-IR-sensitive lithog. plates)

IT Lithographic plates  
(presensitized; photopolymerizable compns. contg. cyanine compds. having tetrazolyl group as sensitizers for near-IR-sensitive lithog. plates)

IT 26936-24-3, Methacrylic acid-methyl acrylate-methyl methacrylate copolymer  
RL: TEM (Technical or engineered material use); USES (Uses)  
(binder; photopolymerizable compns. contg. cyanine compds. having tetrazolyl group as sensitizers for near-IR-sensitive lithog. plates)

IT 3584-23-4, 2-(p-Methoxyphenyl)-4,6-bis(trichloromethyl)-s-triazine  
120307-06-4, Tetrabutylammonium butyltriphenylborate 220651-99-0  
RL: CAT (Catalyst use); USES (Uses)  
(photoinitiator; photopolymerizable compns. contg. cyanine compds. having tetrazolyl group as sensitizers for near-IR-sensitive lithog. plates)

IT 440102-72-7  
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
(photopolymerizable compns. contg. cyanine compds. having tetrazolyl group as sensitizers for near-IR-sensitive lithog. plates)

IT 36446-02-3P, Trimethylolpropane triacrylate homopolymer  
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(photopolymerizable compns. contg. cyanine compds. having tetrazolyl group as sensitizers for near-IR-sensitive lithog. plates)

L48 ANSWER 18 OF 78 CA COPYRIGHT 2003 ACS  
AN 137:54632 CA  
TI Lithographic printing plates having a thermo-deactivatable

**photosensitive layer**  
IN Teng, Gary Ganghui  
PA USA  
SO U.S., 12 pp.  
CODEN: USXXAM  
DT Patent  
LA English  
IC ICM G03F007-038  
ICS G03F007-039  
NCL 430302000  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 38  
FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | US 6410208     | B1   | 20020625 | US 2001-837130  | 20010418 |
| PRAI | US 2001-837130 |      | 20010418 |                 |          |

AB A lithog. printing plate comprises on a substrate a thermo-deactivatable **photosensitive layer** that is **photohardenable** before exposure to an **IR** radiation and can be rendered incapable of or having reduced rate of **photohardening** upon exposure to an **IR** radiation. Optionally, an oleophobic top layer may be deposited on the **photosensitive layer** to form a waterless plate. Such a plate can be imagewise exposed with an **IR** laser to thermally deactivate the **photosensitive layer** in the exposed areas, followed by overall actinic light exposure to harden the **IR** laser non-exposed areas. The exposed plate can be developed with a suitable developer to remove the **IR** laser exposed areas. A plate with an ink and/or fountain soln. sol. or dispersible **photosensitive layer** of this invention can be developed on a printing press with ink and/or fountain soln. during initial press operation.

ST lithog printing plate **photoresit photohardening;**  
**photopolymn** free radical initiator

IT Lithographic plates

**Photoresists**  
    (lithog. printing plates having thermo-deactivatable **photosensitive layer**)

IT Polymerization  
    (**photopolymn.**; lithog. printing plates having thermo-deactivatable **photosensitive layer**)

IT Polymerization catalysts  
    (radical; lithog. printing plates having thermo-deactivatable **photosensitive layer** contg.)

IT 9011-14-7, Neocryl B-728  
RL: TEM (Technical or engineered material use); USES (Uses)  
    (binder in photo-deactivatable **photosensitive layer** of lithog. printing plate)

IT 69432-40-2  
RL: CAT (Catalyst use); USES (Uses)  
    (free-radical initiator in thermo-deactivatable **photosensitive layer** for prep. lithog. printing plate)

IT 101707-39-5, Airvol 205  
RL: TEM (Technical or engineered material use); USES (Uses)  
    (overcoat layer on thermo-deactivatable **photosensitive layer** for prep. lithog. printing plate contg.)

IT 82200-28-0P  
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
    (photo-deactivatable **photosensitive layer** of lithog. printing plate contg.)

IT 577-11-7, Aerosol OT  
RL: TEM (Technical or engineered material use); USES (Uses)  
    (surfactant in overcoat layer on thermo-deactivatable

photosensitive layer for prep. lithog. printing plate)  
RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD  
RE

- (1) Anon; EP 559257 A1 1993 CA
- (2) Blanchet-Fincher; US 6143451 A 2000
- (3) Burberry; US 5674658 A 1997 CA
- (4) Burberry; US 5677106 A 1997 CA
- (5) Cheng; US 5616449 A 1997 CA
- (6) Chia; US 5677110 A 1997 CA
- (7) Damme; US 6165691 A 2000 CA
- (8) Deboer; US 5491046 A 1996 CA
- (9) McCullough; US 6218083 B1 2001 CA
- (10) Nowak; US 5379698 A 1995
- (11) Petersen; US 4132168 A 1979 CA
- (12) Ray; US 6245477 B1 2001 CA
- (13) Sheriff; US 6117610 A 2000 CA
- (14) Takasaki; US 6232038 B1 2001 CA
- (15) Takeda; US 5858604 A 1999 CA
- (16) Teng; US 6014929 A 2000 CAPLUS
- (17) Teng; US 6071675 A 2000 CA
- (18) Teng; US 6245486 B1 2001 CA
- (19) van Damm; US 6214515 B1 2001 CA
- (20) van Damme; US 6153353 A 2000 CA
- (21) van Damme; US 6165679 A 2000 CA
- (22) Vermeersch; US 6210857 B1 2001 CAPLUS
- (23) West; US 5705309 A 1998 CA
- (24) West; US 5759742 A 1998 CA
- (25) West; US 5942372 A 1999 CA
- (26) Yokoya; US 5955238 A 1999 CA

L48 ANSWER 19 OF 78 CA COPYRIGHT 2003 ACS

AN 137:26138 CA

TI Photopolymerization lithographic printing plate for  
near-infrared laser exposure and its manufacture

IN Urano, Toshiyoshi

PA Mitsubishi Chemical Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 38 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM B41N001-14

ICS B41C001-055; G03F007-00; G03F007-028; G03F007-029

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)

Section cross-reference(s): 38

FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 2002166669  | A2   | 20020611 | JP 2000-362422  | 20001129 |
| PRAI | JP 2000-287935 | A    | 20000922 |                 |          |

AB The plate comprises a hydrophilic support having thereon a  
photosensitive layer contg. (A) an ethylenically unsatd. compd.,  
(B) a cyanine sensitizing dye cation linked with a heterocyclic ring  
through a polymethine chain and/or phthalocyanine sensitizing dye, and (C)  
an org. boron anion and/or a halomethyl-contg. compd. It is characterized  
by that peel strength of gum tape from the hydrophilic support is  
.1toreq.500 g/cm. The plate is manufd. by the following steps: (1)  
exposing the photosensitive layer by near IR ray for  
hardening imagewise; (2) installing the exposed plate on a printing  
cylinder; and (3) removing unhardened areas from the support to a blanket  
roller surface by adhesion of ink supplied together with damping water.  
The plate showed high sensitivity can be developed without using alk.  
developer, and handled under white fluorescent lamp.

ST photopolymerizable lithog plate near IR exposure;  
peeling strength photosensitive layer lithog plate; damping

water ink roller development lithog plate  
 IT      Lithographic plates  
           (photopolymerizable lithog plate for IR laser  
           exposure)  
 IT      32435-46-4  
       RL: TEM (Technical or engineered material use); USES (Uses)  
           (PM 2; photopolymerizable lithog plate for IR laser  
           exposure)  
 IT      64630-63-3DP, reaction products with methacrylic acid copolymer  
       167208-84-6DP, Isobutyl acrylate-isobutyl methacrylate-methacrylic  
       acid-methyl methacrylate copolymer, reaction products with epoxy acrylate  
       RL: PNU (Preparation, unclassified); TEM (Technical or engineered material  
       use); PREP (Preparation); USES (Uses)  
           (binder; photopolymerizable lithog plate for IR  
           laser exposure)  
 IT      167208-84-6, Isobutyl acrylate-isobutyl methacrylate-methacrylic  
       acid-methyl methacrylate copolymer  
       RL: TEM (Technical or engineered material use); USES (Uses)  
           (binder; photopolymerizable lithog plate for IR  
           laser exposure)  
 IT      2390-59-2, Ethyl Violet  
       RL: MOA (Modifier or additive use); TEM (Technical or engineered material  
       use); USES (Uses)  
           (photopolymerizable lithog plate for IR laser  
           exposure)  
 IT      90216-38-9P, Allyl methacrylate-methacrylic acid copolymer 220122-96-3P,  
       3-Allyloxy-2-hydroxypropyl methacrylate-methacrylic acid copolymer  
       RL: PNU (Preparation, unclassified); TEM (Technical or engineered material  
       use); PREP (Preparation); USES (Uses)  
           (photopolymerizable lithog plate for IR laser  
           exposure)  
 IT      3584-23-4 9011-14-7, Poly(methyl methacrylate) 25736-86-1,  
       Polyethylene glycol monomethacrylate 29570-58-9, Dipentaerythritol  
       hexaacrylate 56361-55-8, ABPE 4 77001-81-1, UA 306H 143748-80-5,  
       Ebecryl 8301 191726-43-9  
       RL: TEM (Technical or engineered material use); USES (Uses)  
           (photopolymerizable lithog plate for IR laser  
           exposure)  
 IT      259133-57-8 328063-81-6  
       RL: TEM (Technical or engineered material use); USES (Uses)  
           (sensitizer; photopolymerizable lithog plate for IR  
           laser exposure)

L48 ANSWER 20 OF 78 CA COPYRIGHT 2003 ACS  
 AN 137:13272 CA  
 TI Presensitized lithographic master plates containing silane-based  
       electron donors for IR laser platemaking  
 IN Shimada, Kazuto; Sorori, Tadahiro  
 PA Fuji Photo Film Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 24 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM G03F007-029  
       ICS B41N001-14; C08F002-50; C08F004-42; G03F007-00; G03F007-004;  
       G03F007-027; G03F007-075  
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other  
       Reprographic Processes)  
       Section cross-reference(s): 38

| FAN.CNT 1 |                  |       |          |                         |
|-----------|------------------|-------|----------|-------------------------|
|           | PATENT NO.       | KIND  | DATE     | APPLICATION NO. DATE    |
|           | -----            | ----- | -----    | -----                   |
| PI        | JP 2002156755    | A2    | 20020531 | JP 2000-353151 20001120 |
| PRAI      | JP 2000-353151   |       | 20001120 |                         |
| OS        | MARPAT 137:13272 |       |          |                         |

AB The plates, showing superior **photosensitivity** in platemaking, have neg.-working **photoimaging** layers contg. onium-salt-type **photopolymer**. initiators, **photothermal** converters, unsatd. monomers, and silanes ABCDESi-M+ (M = cation; A-E = monovalent nonmetal atom) on supports.

ST presensitized lithog master onium initiator accelerator; electron donating silane PS plate **photosensitivity**; IR laser platemaking presensitized lithog master

IT Onium compounds  
RL: CAT (Catalyst use); TEM (Technical or engineered material use); USES (Uses)  
(**photopolymer**. initiators; presensitized lithog. master plates contg. silane-based electron donors for heat-mode laser platemaking)

IT Polymerization catalysts  
(**photopolymer**., onium salts; presensitized lithog. master plates contg. silane-based electron donors for heat-mode laser platemaking)

IT **Photoimaging** materials  
(**photopolymer**.; presensitized lithog. master plates contg. silane-based electron donors for heat-mode laser platemaking)

IT **Lithographic** plates  
(presensitized, masters; presensitized lithog. master plates contg. silane-based electron donors for heat-mode laser platemaking)

IT 17631-81-1 97889-68-4 106568-07-4 106568-09-6 140143-58-4  
172532-13-7 174363-48-5 432024-05-0 432024-07-2  
RL: CAT (Catalyst use); TEM (Technical or engineered material use); USES (Uses)  
(**photopolymer**. accelerators; presensitized lithog. master plates contg. silane-based electron donors for heat-mode laser platemaking)

IT 19600-49-8 25183-63-5 57835-99-1, Triphenylsulfonium hexafluorophosphate 66003-78-9, Triphenylsulfonium trifluoromethanesulfonate  
RL: CAT (Catalyst use); TEM (Technical or engineered material use); USES (Uses)  
(**photopolymer**. initiators; presensitized lithog. master plates contg. silane-based electron donors for heat-mode laser platemaking)

IT 134127-48-3 173783-73-8 244606-76-6  
RL: TEM (Technical or engineered material use); USES (Uses)  
(**photothermal** converters; presensitized lithog. master plates contg. silane-based electron donors for heat-mode laser platemaking)

IT 57592-66-2P, Pentaerythritol tetraacrylate homopolymer 139385-71-0P, Glycerin dimethacrylate-hexamethylene diisocyanate copolymer  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(presensitized lithog. master plates contg. silane-based electron donors for heat-mode laser platemaking)

L48 ANSWER 21 OF 78 CA COPYRIGHT 2003 ACS

AN 137:13255 CA

TI Near IR laser-sensitive **photopolymerizable** compositions and manufacture of **lithographic** plates using the same

IN Okamoto, Hideaki; Kobori, Kazuhiro

PA Mitsubishi Chemical Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 29 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03F007-004

ICS C08F002-50; G03F007-00; G03F007-027; G03F007-029

CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

FAN.CNT 1

|      | PATENT NO.  | KIND  | DATE     | APPLICATION NO. | DATE     |
|------|---|---|----------|-----------------|----------|
| PI   | JP 2002156751   | A2  | 20020531 | JP 2000-369416  | 20001205 |
| PRAI | JP 2000-267932  | A   | 20000905 |                 |          |
| AB   | <p>The compns. contain (A) ethylenically unsatd. compds., (B) cyanine-based sensitizing dyes having heterocyclic rings bonded via polymethyne chains and/or phthalocyanine-based sensitizing dyes, (C) org. boric anions and/or halomethyl group-contg. compds., and (D) 3&lt; and .1toreq.20% colorants having absorption max. at 450-650 nm, preferably basic dyes, more preferably, triphenylmethane-based dyes. The compns. are applied on lithog. supports, exposed to near IR laser of 750-1200 nm, and developed with alkali developers to give lithog. plates. The colorants of that absorption max. can be compounded in the compns. relatively large amts., offering good visibility of the images, without sacrificing the sensitivity to near IR light. Moreover, treatment such as dispersing is not necessary and the compns. are free from problems like aggregation of the colorants, thereby offering good storage stability and durability in printing.</p> |   |          |                 |          |
| ST   | <p>near IR laser sensitive photopolymerizable compn;<br/>lithog plate near IR laser sensitive layer; triphenylmethane dye<br/>near IR laser lithog</p>  |   |          |                 |          |
| IT   | <p><b>Photoimaging</b> materials<br/>(color; near IR laser-sensitive photopolymerizable<br/>compns. contg. colorants of specific .lambda.max for lithog. plates)</p>  |   |          |                 |          |
| IT   | <p><b>Lithographic</b> plates<br/>(near IR laser-sensitive photopolymerizable compns.<br/>contg. colorants of specific .lambda.max for lithog. plates)</p>  |   |          |                 |          |
| IT   | 368868-46-6   | <p>RL: TEM (Technical or engineered material use); USES (Uses)<br/>(binder; near IR laser-sensitive photopolymerizable<br/>compns. contg. colorants of specific .lambda.max for lithog. plates)</p>   |          |                 |          |
| IT   | 2390-59-2, Ethyl Violet   | <p>RL: CAT (Catalyst use); USES (Uses)<br/>(colorant, offering good visibility without sacrificing sensitivity;<br/>near IR laser-sensitive photopolymerizable compns.<br/>contg. colorants of specific .lambda.max for lithog. plates)</p> |          |                 |          |
| IT   | 24599-21-1 32435-46-4 64401-02-1, Bisphenol A polyethylene glycol<br>diether diacrylate 77001-81-1  | <p>RL: TEM (Technical or engineered material use); USES (Uses)<br/>(near IR laser-sensitive photopolymerizable compns.<br/>contg. colorants of specific .lambda.max for lithog. plates)</p>   |          |                 |          |
| IT   | 3584-23-4   | <p>RL: CAT (Catalyst use); USES (Uses)<br/>(radical initiator; near IR laser-sensitive<br/>photopolymerizable compns. contg. colorants of specific<br/>.lambda.max for lithog. plates)</p>  |          |                 |          |
| IT   | 259133-57-8   | <p>RL: CAT (Catalyst use); USES (Uses)<br/>(sensitizer; near IR laser-sensitive<br/>photopolymerizable compns. contg. colorants of specific<br/>.lambda.max for lithog. plates)</p>   |          |                 |          |
| L48  | ANSWER 22 OF 78 CA COPYRIGHT 2003 ACS   |   |          |                 |          |
| AN   | 136:377522 CA   |   |          |                 |          |
| TI   | Negative-working IR-sensitive photopolymerizable<br>image-forming material, image formation, and presensitized<br>photopolymerizable lithographic plate   |   |          |                 |          |
| IN   | Okamoto, Hideaki  |   |          |                 |          |
| PA   | Mitsubishi Chemical Corp., Japan  |   |          |                 |          |
| SO   | Jpn. Kokai Tokkyo Koho, 14 pp.  |   |          |                 |          |
|      | CODEN: JKXXAF   |   |          |                 |          |
| DT   | Patent  |   |          |                 |          |
| LA   | Japanese  |   |          |                 |          |
| IC   | ICM G03F007-11<br>ICS B41N001-14; G03F007-00; G03F007-004   |   |          |                 |          |

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 38

FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 2002139843  | A2   | 20020517 | JP 2000-336815  | 20001106 |
| PRAI | JP 2000-336815 |      | 20001106 |                 |          |

AB In the image-forming material comprising (a) a support, (b) a **photopolymerizable** compn. layer contg. an ethylenic monomer, a sensitizing dye absorbing a light of 650-1300 nm, and a radical-generating agent, and (c) a protective layer; the protective layer contains 30-90 wt.% of polyvinyl alc. The image-forming material is image-wise exposed with the light and developed with an alkali developer to form the image. Also claimed is a **photopolymerizable** lithog. plate employing the material and Al as a support. The image-forming material shows high sensitivity to IR and can be used under the irradn. circumstance of a visible white safelight.

ST **IR photoimaging** material protective coating polyvinyl alc; **photopolymerizable** lithog plate protective coating polyvinyl alc

IT **Photoimaging** materials

(neg. working; neg.-working IR-sensitive  
**photopolymerizable** image-forming material for  
**photopolymerizable** lithog. plate)

IT **Lithographic plates**

(neg.-working IR-sensitive **photopolymerizable**  
image-forming material for **photopolymerizable** lithog. plate)

IT Polyethers, preparation

RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)  
(polyamide-polyester-, lithog. plate; neg.-working IR-sensitive **photopolymerizable** image-forming material for **photopolymerizable** lithog. plate)

IT Polyesters, preparation

RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)  
(polyamide-polyether-, lithog. plate; neg.-working IR-sensitive **photopolymerizable** image-forming material for **photopolymerizable** lithog. plate)

IT Polyamides, preparation

RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)  
(polyester-polyether-, lithog. plate; neg.-working IR-sensitive **photopolymerizable** image-forming material for **photopolymerizable** lithog. plate)

IT Coating materials

(vinyl alc.-contg.; neg.-working IR-sensitive  
**photopolymerizable** image-forming material for  
**photopolymerizable** lithog. plate)

IT 425380-41-2P

RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)  
(lithog. plate; neg.-working IR-sensitive  
**photopolymerizable** image-forming material for  
**photopolymerizable** lithog. plate)

IT 32435-46-4 64401-02-1 77001-81-1

RL: TEM (Technical or engineered material use); USES (Uses)  
(neg.-working IR-sensitive **photopolymerizable**  
image-forming material for **photopolymerizable** lithog. plate)

IT 9002-89-5, GL 03 9003-39-8, Luviskol K 30 25213-24-5, Vinyl acetate-vinyl alcohol copolymer

RL: TEM (Technical or engineered material use); USES (Uses)  
(protective layer component; neg.-working IR-sensitive  
**photopolymerizable** image-forming material for

IT photopolymerizable lithog. plate)  
 IT 3584-23-4  
 RL: TEM (Technical or engineered material use); USES (Uses)  
     (radical-generating agent; neg.-working IR-sensitive  
     photopolymerizable image-forming material for  
     photopolymerizable lithog. plate)

IT 425380-40-1  
 RL: TEM (Technical or engineered material use); USES (Uses)  
     (sensitizing dye; neg.-working IR-sensitive  
     photopolymerizable image-forming material for  
     photopolymerizable lithog. plate)

L48 ANSWER 23 OF 78 CA COPYRIGHT 2003 ACS  
 AN 136:361831 CA  
 TI Photosensitive lithographic printing plate  
 IN Oshima, Yasuhito  
 PA Fuji Photo Film Co., Ltd., Japan  
 SO Eur. Pat. Appl., 49 pp.  
 CODEN: EPXXDW

DT Patent  
 LA English  
 IC ICM G03F007-033  
 ICS B41C001-10  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 3

| PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE     |
|--|------|----------|-----------------|----------|
| EP 1204000   | A1   | 20020508 | EP 2001-125486  | 20011106 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,<br>IE, SI, LT, LV, FI, RO, MK, CY, AL, TR |      |          |                 |          |
| JP 2002139828  | A2   | 20020517 | JP 2000-337688  | 20001106 |
| CN 1353340   | A    | 20020612 | CN 2001-134562  | 20011106 |
| PRAI JP 2000-337688  | A    | 20001106 |                 |          |

AB A photosensitive lithog. printing plate is described which is useful for direct-laser write applications and provides durable prints under high productivity conditions. The plate contains a photosensitive layer contg. a poly(vinyl alc.) resin binder modified with an acetal skeleton comprising an aliph. cyclic structure. The photosensitive also contains: a photopolymn. initiator, a heat polymn. initiator, an addn. polymerizable compd., a sensitizer dye, a co-sensitizer dye, a color pigment, a fluorine-based surfactant, an IR absorber.

ST photosensitive lithog printing plate acetal modified polyvinyl alc binder; aliph cyclic structure modified polyvinyl alc binder printing plate

IT Lithographic plates  
     (neg.-working presensitized; lithog. printing plate for direct-write with photosensitive layer contg. poly(vinyl alc.) binder modified with acetal skeleton having aliph. cyclic structure)

IT Polyurethanes, uses  
 RL: DEV (Device component use); USES (Uses)  
     (photosensitive coating binder mixt.; lithog. printing plate for direct-write with photosensitive layer contg. poly(vinyl alc.) binder modified with acetal skeleton having aliph. cyclic structure)

IT 64-02-8 102-71-6, Triethanolamine, uses 141-43-5, Monoethanolamine, uses 298-14-6 1312-76-1, Potassium silicate 1321-69-3 5968-11-6, Sodium carbonate monohydrate 7757-83-7, Sodium sulfite 25417-20-3, Sodium dibutylnaphthalene sulfonate 25638-17-9 28348-64-3, Sodium isopropylnaphthalene sulfonate 126305-25-7 421557-82-6  
 RL: NUU (Other use, unclassified); USES (Uses)  
     (developer compn.; lithog. printing plate for direct-write with photosensitive layer contg. poly(vinyl alc.) binder modified with acetal skeleton having aliph. cyclic structure)

IT 134127-48-3  
 RL: DEV (Device component use); USES (Uses)  
 (photosensitive coating IR absorber; lithog.  
 printing plate for direct-write with photosensitive layer  
 contg. poly(vinyl alc.) binder modified with acetal skeleton having  
 aliph. cyclic structure)

IT 4986-89-4, NK ester A-TMMT 29570-58-9, NK ester A-9530 139385-71-0, US  
 101H  
 RL: DEV (Device component use); USES (Uses)  
 (photosensitive coating addn. polymerizable compd.; lithog.  
 printing plate for direct-write with photosensitive layer  
 contg. poly(vinyl alc.) binder modified with acetal skeleton having  
 aliph. cyclic structure)

IT 90216-38-9, Allyl methacrylate-methacrylic acid copolymer 141634-00-6,  
 Methyl methacrylate-acrylonitrile-N-[(4-sulfamoyl)phenyl]methacrylamide  
 copolymer 293329-29-0, MDI-HMDI-polypropylene glycol-2,2-  
 bis(hydroxymethyl) propionic acid copolymer  
 RL: DEV (Device component use); USES (Uses)  
 (photosensitive coating binder mixt.; lithog. printing plate  
 for direct-write with photosensitive layer contg. poly(vinyl  
 alc.) binder modified with acetal skeleton having aliph. cyclic  
 structure)

IT 85-42-7D, 1,2-Cyclohexanedicarboxylic anhydride, reaction products with  
 poly(vinyl alc.) and cyclohexanecarboxy aldehyde 2043-61-0D,  
 Cyclohexanecarboxaldehyde, reaction product with poly(vinyl alc.) and  
 cyclohexanedicarboxylic anhydride 9002-89-5D, Poly(vinyl alcohol),  
 sapon., reaction product with cyclohexanecarboxy aldehyde and  
 cyclohexanedicarboxylic anhydride  
 RL: DEV (Device component use); USES (Uses)  
 (photosensitive coating binder; lithog. printing plate for  
 direct-write with photosensitive layer contg. poly(vinyl  
 alc.) binder modified with acetal skeleton having aliph. cyclic  
 structure)

IT 583-39-1 120307-06-4 293329-35-8  
 RL: DEV (Device component use); USES (Uses)  
 (photosensitive coating co-initiator; lithog. printing plate  
 for direct-write with photosensitive layer contg. poly(vinyl  
 alc.) binder modified with acetal skeleton having aliph. cyclic  
 structure)

IT 120457-86-5  
 RL: DEV (Device component use); USES (Uses)  
 (photosensitive coating heat polymn. inhibitor; lithog.  
 printing plate for direct-write with photosensitive layer  
 contg. poly(vinyl alc.) binder modified with acetal skeleton having  
 aliph. cyclic structure)

IT 13891-29-7 220476-51-7 262612-33-9  
 RL: DEV (Device component use); USES (Uses)  
 (photosensitive coating heat polymn. initiator; lithog.  
 printing plate for direct-write with photosensitive layer  
 contg. poly(vinyl alc.) binder modified with acetal skeleton having  
 aliph. cyclic structure)

IT 125051-32-3 125407-19-4  
 RL: DEV (Device component use); USES (Uses)  
 (photosensitive coating photopolymn. initiator;  
 lithog. printing plate for direct-write with photosensitive  
 layer contg. poly(vinyl alc.) binder modified with acetal skeleton  
 having aliph. cyclic structure)

IT 118234-41-6 421548-66-5  
 RL: DEV (Device component use); USES (Uses)  
 (photosensitive coating sensitizer dye; lithog. printing  
 plate for direct-write with photosensitive layer contg.  
 poly(vinyl alc.) binder modified with acetal skeleton having aliph.  
 cyclic structure)

IT 85568-56-5, Megafac F-177 335612-65-2, Victoria pure blue  
 naphthalenesulfonate

RL: DEV (Device component use); USES (Uses)  
     (**photosensitive** coating; lithog. printing plate for  
     direct-write with **photosensitive** layer contg. poly(vinyl  
     alc.) binder modified with acetal skeleton having aliph. cyclic  
     structure)  
 IT 9002-89-5, Poly(vinyl alcohol)  
 RL: DEV (Device component use); USES (Uses)  
     (protective film; lithog. printing plate for direct-write with  
     **photosensitive** layer contg. poly(vinyl alc.) binder modified  
     with acetal skeleton having aliph. cyclic structure)  
 IT 6834-92-0  
 RL: NUU (Other use, unclassified); USES (Uses)  
     (substrate hydrophilic treatment; lithog. printing plate for  
     direct-write with **photosensitive** layer contg. poly(vinyl  
     alc.) binder modified with acetal skeleton having aliph. cyclic  
     structure)  
 IT 86468-54-4, Ethyl methacrylate-sodium 2-acrylamido-2-methyl-1-  
     propanesulfonate copolymer 141087-50-5, 3-Methacryloxypropyl  
     trimethoxysilane-Tetraethoxysilane copolymer 142938-52-1  
 RL: DEV (Device component use); USES (Uses)  
     (substrate interlayer sol compn.; lithog. printing plate for  
     direct-write with **photosensitive** layer contg. poly(vinyl  
     alc.) binder modified with acetal skeleton having aliph. cyclic  
     structure)  
 IT 67-56-1, Methanol, uses 107-21-1, Ethylene glycol, uses  
 RL: NUU (Other use, unclassified); USES (Uses)  
     (substrate interlayer sol compn.; lithog. printing plate for  
     direct-write with **photosensitive** layer contg. poly(vinyl  
     alc.) binder modified with acetal skeleton having aliph. cyclic  
     structure)  
 IT 7429-90-5, Aluminum, uses  
 RL: DEV (Device component use); USES (Uses)  
     (substrate; lithog. printing plate for direct-write with  
     **photosensitive** layer contg. poly(vinyl alc.) binder modified  
     with acetal skeleton having aliph. cyclic structure)

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) American Hoechst Corporation; EP 0211406 A 1987 CA
- (2) Hitachi Ltd; JP 06122713 A 1994 CA
- (3) Mitsubishi Chem Ind Ltd; JP 58134629 A 1983 CA
- (4) Sekisui Kagaku Kogyo Kabushiki Kaisha; EP 0150293 A 1985 CA

L48 ANSWER 24 OF 78 CA COPYRIGHT 2003 ACS

AN 136:332792 CA

TI **IR** laser heat mode type negative working **lithographic**  
printing plate master

IN Shimada, Kazuto; Nakamura, Ippei; Sorori, Tadahiro

PA Fuji Photo Film Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 25 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03F007-029

ICS B41N001-14; G03F007-00; G03F007-004; G03F007-027

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reproductive Processes)

FAN.CNT 1

|      | PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|------|---|------|----------|-----------------|----------|
| PI   | JP 2002116539   | A2   | 20020419 | JP 2000-310808  | 20001011 |
| PRAI | JP 2000-310808  |      | 20001011 |                 |          |
| OS   | MARPAT 136:332792   |      |          |                 |          |
| AB   | The title heat mode type neg. working lithog. printing plate master<br>contains (A) an onium type polymn. initiator, (B) a photothermal<br>conversion compd., (C) a polymerizable compd., and (D) a borate compd. |      |          |                 |          |

represented by Ar<sub>4</sub>B-M<sup>+</sup> (M<sup>+</sup> = cation; Ar = arom.) in a photosensitive layer. The printing plate master shows excellent sensitivity and storage stability.

ST IR laser heat mode neg working lithog printing plate

IT Lithographic plates  
 (IR laser heat mode type neg. working lithog. printing plate master)

IT Photoimaging materials  
 (photopolymerizable; IR laser heat mode type neg. working lithog. printing plate master)

IT 143-66-8 15522-59-5 15525-15-2 26985-34-2 108479-75-0  
 144699-38-7 146761-08-2 153347-65-0 159123-85-0 412267-88-0  
 412267-90-4 412267-92-6 412267-93-7 412267-95-9 412267-96-0  
 RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)  
 (borate compd. in photosensitive layer of IR laser heat mode type neg. working lithog. printing plate master to improve sensitivity as well as storage stability)

IT 134127-48-3 173783-73-8 244606-76-6  
 RL: DEV (Device component use); USES (Uses)  
 (photothermal conversion compd. in photosensitive layer of IR laser heat mode type neg. working lithog. printing plate master to improve sensitivity as well as storage stability)

IT 4986-89-4, Pentaerythritol tetraacrylate 139385-71-0, Glycerin dimethacrylate-hexamethylene diisocyanate copolymer  
 RL: DEV (Device component use); USES (Uses)  
 (polymerizable compd. in photosensitive layer of IR laser heat mode type neg. working lithog. printing plate master to improve sensitivity as well as storage stability)

IT 19600-49-8 25183-63-5 57835-99-1 66003-76-7 66003-78-9  
 398141-25-8 412043-42-6 412043-43-7  
 RL: CAT (Catalyst use); USES (Uses)  
 (polymn. initiator in photosensitive layer of IR laser heat mode type neg. working lithog. printing plate master to improve sensitivity as well as storage stability)

L48 ANSWER 25 OF 78 CA COPYRIGHT 2003 ACS  
 AN 136:286628 CA  
 TI Image-recording material and lithographic printing plate using the same  
 IN Shibuya, Akinori; Kunita, Kazuto; Oshima, Yasuhito  
 PA Fuji Photo Film Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 67 pp.  
 CODEN: JKXXAF

DT Patent  
 LA Japanese  
 IC ICM G03F007-11  
 ICS G03F007-00; G03F007-027; G03F007-028; G03F007-032; G03F007-09;  
 G03F007-095

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 35, 38, 41

FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 2002099094  | A2   | 20020405 | JP 2000-288940  | 20000922 |
| PRAI | JP 2000-288940 |      | 20000922 |                 |          |

AB The invention relates to an image-recording material suitable for a CTP system. The image-recording material comprises on a support a photopolymerizable layer contg. a photopolymn initiator, a sensitizing dye, an addn. polymerizable ethylenic compd., and a polymer binder and an intermediate layer contg. a photopolymn. initiator. The photopolymn. initiator in the intermediate layer is able to interact with the hydrophilic Al support. The lithog. printing

plate using above image-forming material is also claimed.  
ST computer to plate lithog printing plate  
IT **Lithographic plates**  
    (image-recording material for lithog. printing plate)  
IT Polyesters, uses  
Polyurethanes, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
    (image-recording material for lithog. printing plate)  
IT 3712-60-5 25183-63-5 246540-24-9  
RL: TEM (Technical or engineered material use); USES (Uses)  
    (IR dye; image-recording material for lithog. printing plate)  
IT 106-96-7DP, Propargylbromide, reaction product with  
poly((dimethylamino)ethyl methacrylate) 1592-20-7DP,  
4-(Chloromethyl)styrene, reaction products with poly(4-vinylpyridine)  
2867-47-2DP, 2-(Dimethylamino)ethyl methacrylate, reaction product with  
poly(chloromethylstyrene) 9080-67-5DP, Poly(chloromethylstyrene),  
reaction product with 2-(dimethylamino)ethyl methacrylate 25154-86-3DP,  
Poly((dimethylamino)ethyl methacrylate), propargylbromide 25232-41-1DP,  
Poly(4-vinylpyridine), reaction products with 4-(chloromethyl)styrene  
30674-80-7DP, reaction products with -vinylbenzoic acid-(4-  
vinylbenzyl)triethyl ammonium chloride copolymer 53160-51-3P, Acrylic  
acid-allyl methacrylate copolymer 220227-02-1DP, reaction products with  
2-(methacryloyloxy)ethylisocyanate 371971-09-4P, 4-Vinylbenzoic  
acid-(4-vinylbenzyl)triethyl ammonium chloride copolymer, ester with  
glycidyl methacrylate  
RL: SPN (Synthetic preparation); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
    (image-recording material for lithog. printing plate)  
IT 51763-07-6 138569-95-6 293329-40-5 305369-28-2 305369-32-8  
371229-72-0 406679-92-3 406679-94-5 406679-95-6 406679-96-7  
RL: TEM (Technical or engineered material use); USES (Uses)  
    (sensitizing dye; image-recording material for lithog. printing plate)  
IT 7429-90-5, Aluminum, uses  
RL: DEV (Device component use); USES (Uses)  
    (support for lithog. printing plate)

L48 ANSWER 26 OF 78 CA COPYRIGHT 2003 ACS  
AN 136:224269 CA  
TI Near-IR-sensitive photopolymerizable compositions,  
lithographic plate having layer of the composition, and processing  
of the plate  
IN Urano, Toshiyoshi; Tsuruya, Yasuyuki  
PA Mitsubishi Chemical Corp., Japan  
SO Jpn. Kokai Tokkyo Koho, 28 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM G03F007-004  
    ICS C08F002-50; G03F007-00; G03F007-027; G03F007-029  
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reproductive Processes)  
FAN.CNT 1

| PATENT NO.          | KIND | DATE     | APPLICATION NO. | DATE     |
|---------------------|------|----------|-----------------|----------|
| -----               | ---- | -----    | -----           | -----    |
| PI JP 2002072466    | A2   | 20020312 | JP 2000-368413  | 20001204 |
| PRAI JP 2000-180983 | A    | 20000616 |                 |          |

AB The compns. contain (A) ethylenically-unsatd. compds., (B) cyanine dye cations and/or phthalocyanine dyes as sensitizers, (C) org. B anions and/or halomethyl compds., and 1-3% (D) coloring dyes having absorption max. 450-650 nm. A lithog. plate is manufd. by imagewise exposure of a presensitized plate having a layer of the above compn. on a support to 750-1200-nm near-IR laser and development with an alk. developer. The compns. have high sensitivity, good storage stability, and image visibility after development.  
ST near IR sensitive presensitized lithog plate coloring dye

IT Dyes  
     (basic; near-IR-sensitive photopolymerizable  
         comps. contg. coloring dyes for presensitized lithog. plates)  
 IT Lithographic plates  
     (presensitized; near-IR-sensitive photopolymerizable  
         comps. contg. coloring dyes for presensitized lithog. plates)  
 IT 633-03-4, Brilliant Green 2390-60-5, Victoria Pure Blue BO  
     RL: MOA (Modifier or additive use); TEM (Technical or engineered material  
         use); USES (Uses)  
     (near-IR-sensitive photopolymerizable comps.  
         contg. coloring dyes for presensitized lithog. plates)

L48 ANSWER 27 OF 78 CA COPYRIGHT 2003 ACS  
 AN 136:136407 CA  
 TI Photosensitive recording element and method of preparation  
     thereof  
 IN Patel, Jayanti; Shimazu, Kenichi; Huang, Jianbing; Merchant, Nishith;  
     Pappas, Peter S.  
 PA Kodak Polychrome Graphics Company Ltd., USA  
 SO Eur. Pat. Appl., 19 pp.  
     CODEN: EPXXDW  
 DT Patent  
 LA English  
 IC ICM B41M005-36  
     ICS B41C001-10  
 CC 42-13 (Coatings, Inks, and Related Products)  
 FAN.CNT 1

|      | PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |  |
|------|---|------|----------|-----------------|----------|--|
| PI   | EP 1177911  | A1   | 20020206 | EP 2001-306757  | 20010806 |  |
|      | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,<br>IE, SI, LT, LV, FI, RO  |      |          |                 |          |  |
| PRAI | US 2000-633029  | A    | 20000804 |                 |          |  |
| AB   | The element comprises (A) a substrate; and (B) an imagable compn. applied<br>to the substrate comprising (1) a 1st layer, comprising (a) a<br>photosensitive compn. capable of absorbing actinic radiation; and<br>(b) a photothermal converter; and (2) an ablative 2nd layer<br>contiguous to the 1st layer, wherein the 2nd layer is opaque to the<br>actinic radiation. This element advantageously is useful in both pos. and<br>neg. working printing plate applications, increases the efficiency of use<br>of mask-generating radiation such as IR radiation and eliminates<br>the need for chems. and addnl. time to create a mask. Thus, an element<br>was made from a treated Al substrate; a 1st coating of MEK and<br>2-methoxyethanol mixt. contg. SD 140A, ADS 830A, and P 3000; and a 2nd<br>coating of H2O and MeOH mixt. contg. DTS 18 (4-Diazodiphenylamine hydrogen<br>sulfate-formaldehyde copolymer) and Airvol 203S. |      |          |                 |          |  |
| ST   | photosensitive recording element phenolic coating; pyrogallol<br>acetone copolymer photosensitive recording element;<br>naphthoquinone diazide copolymer coating; offset lithog printing image<br>element   |      |          |                 |          |  |
| IT   | Coating materials<br>(light-sensitive; photosensitive recording element and method<br>of prepns. thereof)   |      |          |                 |          |  |
| IT   | Lithographic plates<br>(offset; photosensitive recording element and method of<br>prepns. thereof)  |      |          |                 |          |  |
| IT   | Catalysts<br>(photochem.; photosensitive recording element and<br>method of prepns. thereof)  |      |          |                 |          |  |
| IT   | Cycloaddition reaction<br>(photocycloaddn.; photosensitive recording element<br>and method of prepns. thereof)  |      |          |                 |          |  |
| IT   | Polymerization<br>(photopolymn.; photosensitive recording element and<br>method of prepns. thereof)   |      |          |                 |          |  |

IT Optical recording materials  
(photosensitive recording element and method of prepn.  
thereof)

IT Aminoplasts  
RL: EPR (Engineering process); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(photosensitive recording element and method of prepn.  
thereof)

IT 41432-19-3, 4-Diazodiphenylamine hydrogen sulfate-formaldehyde copolymer  
RL: EPR (Engineering process); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(DTS 18; photosensitive recording element and method of prepn.  
thereof)

IT 9016-83-5, SD 140A 58206-31-8, Scriptset 550 58748-38-2, National  
Starch 28-2930 68584-99-6, P 3000 134127-48-3, ADS 830A 163442-59-9,  
Airvol 203S  
RL: EPR (Engineering process); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(photosensitive recording element and method of prepn.  
thereof)

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Agfa-Gevaert Naamloze Venootschap; EP 0803770 A 1997 CA  
(2) Lewis, T; US 5353705 A 1994  
(3) Takeda, K; US 5858604 A 1999 CA  
(4) van Damme, M; US 5922502 A 1999 CA  
(5) Vincett, P; US 5102756 A 1992  
(6) Williams, R; US 5440987 A 1995

L48 ANSWER 28 OF 78 CA COPYRIGHT 2003 ACS

AN 136:61542 CA

TI Thermal digital lithographic printing plate

IN Hauck, Celin-Savariar; Shimazu, Kenichi; Timpe, Hans-Joachim; Patel, Jayanti; Huang, Jianbing

PA Kodak Polychrome Graphics Company Ltd., USA

SO PCT Int. Appl., 42 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM B41C001-10

ICS B41N003-03

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 35, 38

FAN.CNT 6

|      | PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|------|---|------|----------|-----------------|----------|
| PI   | WO 2001096119   | A1   | 20011220 | WO 2000-US33605 | 20001212 |
|      | W: BR, JP   |      |          |                 |          |
|      | RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,   |      |          |                 |          |
|      | PT, SE, TR  |      |          |                 |          |
|      | US 6534238  | B1   | 20030318 | US 2000-592895  | 20000613 |
|      | EP 1303399  | A1   | 20030423 | EP 2000-986322  | 20001212 |
|      | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  |      |          |                 |          |
|      | IE, FI, CY, TR  |      |          |                 |          |
| PRAI | US 2000-592895  | A    | 20000613 |                 |          |
|      | US 1998-90300P  | P    | 19980623 |                 |          |
|      | US 1999-301866  | A2   | 19990429 |                 |          |
|      | US 1999-469489  | A2   | 19991222 |                 |          |
|      | WO 2000-US33605   | W    | 20001212 |                 |          |
| AB   | A thermally imageable element, useful as a lithog. printing plate precursor is disclosed. The element comprises a hydrophilic substrate; an |      |          |                 |          |

underlayer comprising a first polymeric material; and an ink-receptive top layer comprising a second polymeric material and a solv.-suppressing component. The solv.-suppressing component may be a sep. dissoln. inhibitor compd. and/or the second polymeric material may also function as a solv.-suppressing component. On thermal exposure the exposed regions of the top layer becomes more readily sol. in an aq. developer, allowing the developer to remove the top layer and reveal the surface of the hydrophilic substrate. The lithog. printing plate thus formed has excellent properties, including the absence of sludging of the developer.

ST thermal digital lithog printing plate  
IT Polyvinyl acetals  
RL: TEM (Technical or engineered material use); USES (Uses)  
(carboxy functional; thermal digital lithog. printing plate contg.)  
IT Phenolic resins, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(novolak, cresol-based, tosylated; thermal digital lithog. printing plate contg.)  
IT **Lithographic plates**  
Thermal printing materials  
(polymeric material and substrate for)  
IT 134127-48-3, EC 2117  
RL: TEM (Technical or engineered material use); USES (Uses)  
(ADS 830A, EC 2117, Trump IR, inhibitor; thermal digital lithog. printing plate contg.)  
IT 9016-83-5, LB 744  
RL: TEM (Technical or engineered material use); USES (Uses)  
(LB 744; thermal digital lithog. printing plate contg.)  
IT 184348-68-3, PMP 234  
RL: TEM (Technical or engineered material use); USES (Uses)  
(PMP 234; thermal digital lithog. printing plate contg.)  
IT 94108-97-1D, Ditrimethylolpropane tetraacrylate, polymer with acrylic resin  
RL: TEM (Technical or engineered material use); USES (Uses)  
(Sartomer 355; thermal digital lithog. printing plate photopolymerizable compn. contg.)  
IT 1941-30-6, Tetrapropyl ammonium bromide 2390-59-2, Ethyl violet  
RL: TEM (Technical or engineered material use); USES (Uses)  
(inhibitor; thermal digital lithog. printing plate contg.)  
IT 27754-99-0, Polyvinyl phosphonic acid  
RL: TEM (Technical or engineered material use); USES (Uses)  
(substrate coating; thermal digital lithog. printing plate contg.)  
IT 63-74-1D, p-Aminobenzenesulfonamide, reaction with maleimide-Me vinyl ether copolymer 98-59-9D, p-Toluene sulfonyl chloride, reaction products with cresol novolaks 52229-50-2D, Gantrez AN 119, reaction with aminobenzenesulfonamide 141634-00-6, Acrylonitrile-methyl methacrylate-N-(p-aminosulfonylphenyl)methacrylamide copolymer 253272-47-8, Nega 107 321963-43-3, Methacrylic acid-methacrylamide-N-phenylmaleimide copolymer 381206-89-9 381213-54-3D, PD 140, tosylated to 3.0 mol% 381213-69-0, SPN 400  
RL: TEM (Technical or engineered material use); USES (Uses)  
(thermal digital lithog. printing plate contg.)  
IT 603-48-5, Leuco crystal violet 86003-21-6, Actilane 20 161279-62-5, Joncryl 683 381213-71-4, Jagotex MA 2814/3  
RL: TEM (Technical or engineered material use); USES (Uses)  
(thermal digital lithog. printing plate photopolymerizable compn. contg.)

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Agfa-Gevaert; EP 0940266 A 1999 CA
- (2) Dainippon Ink & Chemicals; EP 0737896 A 1996 CA
- (3) Dainippon Ink & Chemicals; US 5731127 A 1998 CA
- (4) Fuji; EP 0894622 A 1999 CA
- (5) Horsell Graphic; WO 9739894 A 1997 CA
- (6) Nguyen; US 6060217 A 2000 CA

L48 ANSWER 29 OF 78 CA COPYRIGHT 2003 ACS

AN 135:378742 CA

TI Photopolymerizable composition containing subphthalocyanine dye  
and photopolymerizable imaging material using it

IN Urano, Toshiyoshi; Sakamoto, Keiichi

PA Mitsubishi Chemical Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 16 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03F007-029

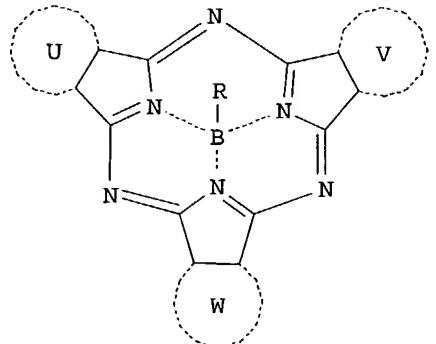
ICS C08F002-44; C08F002-50; G03F007-027; G03F007-031; C09B047-08

CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reproductive Processes)

FAN. CNT 1

|      | PATENT NO.        | KIND | DATE     | APPLICATION NO. | DATE     |
|------|-------------------|------|----------|-----------------|----------|
| PI   | JP 2001318462     | A2   | 20011116 | JP 2000-192071  | 20000627 |
| PRAI | JP 2000-50840     | A    | 20000228 |                 |          |
| OS   | MARPAT 135:378742 |      |          |                 |          |

GI



I

AB The compn. comprises (A) ethylenically unsatd. compds., (B) a subphthalocyanine dye contg. B as a central element I [R = (substituted) alkyl, (substituted) Ph, halo; U, V, W = (substituted) condensed arom. (heterocyclic) ring], and (C) photopolymn. initiators. The imaging material comprises a substrate coated with the above compn. layer. The compn. shows high sensitivity to laser beams from visible to IR region and high solv to solvents to be useful for lithog. plates.

ST photopolymerizable imaging boron subphthalocyanine dye lithog plate

IT Photoimaging materials

(photopolymerizable; photopolymerizable compn.  
contg. subphthalocyanine dye for imaging material)

IT Lithographic plates

(presensitized; photopolymerizable compn. contg.  
subphthalocyanine dye for imaging material)

IT 25751-21-7, Acrylic acid-methacrylic acid copolymer 36530-06-0  
77001-81-1, UA 306H 142710-55-2 173866-25-6 203742-63-6, Acrylic  
acid-styrene copolymer ester with 3,4-epoxycyclohexylmethyl acrylate  
373600-00-1 373600-01-2, Boron (chloro[7,12:14,19-diimino-21,5-nitrilo-  
5H-tripyrido[3,4-c:3',4'-h:3'',4'''-m][1,6,11]triazacyclopentadecinato(2-)-  
.kappa.N22,.kappa.N23,.kappa.N24]-)

RL: DEV (Device component use); TEM (Technical or engineered material  
use); USES (Uses)

(photopolymerizable compn. contg. subphthalocyanine dye for  
imaging material)

IT 1707-68-2 3584-23-4 125051-32-3 191726-43-9  
RL: CAT (Catalyst use); USES (Uses)  
(photopolym. initiator; photopolymerizable compn.  
contg. subphthalocyanine dye for imaging material)

L48 ANSWER 30 OF 78 CA COPYRIGHT 2003 ACS  
AN 135:350408 CA  
TI Laser diode (LD) imaging and **photopolymers** for LD imaging  
AU Urano, Toshiyuki  
CS Research Center, Mitsubishi Chemical Corp., Aoba-ku, Yokohama, 227, Japan  
SO Proceedings of SPIE-The International Society for Optical Engineering  
(2001), 4274(Laser Applications in Microelectronic and Optoelectronic  
Manufacturing VI), 18-28  
CODEN: PSISDG; ISSN: 0277-786X  
PB SPIE-The International Society for Optical Engineering  
DT Journal  
LA English  
CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reproductive Processes)  
Section cross-reference(s): 73, 76  
AB The laser **photopolymers** and the laser imaging systems equipped  
with various laser diodes such as 410 nm-Violet laser, 532  
nm-frequency-doubled laser and high-power- **IR** laser are  
presented. The **photopolymer's** performances in sensitivity,  
resoln. and safelight character dependent on the wavelength and power of  
laser light are discussed.

ST laser diode imaging **photopolymer**  
IT **IR** lasers  
Imaging  
    **Lithography**  
        (laser diode imaging and **photopolymers** for laser diode  
        imaging)  
IT Polymers, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(photo; laser diode imaging and **photopolymers** for  
laser diode imaging)

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD  
RE  
(1) Nagasaka, H; Mitsubishi Kasei R and D 1992, V1, P52  
(2) Urano, T; Japan Printer 2000, V11, P19

L48 ANSWER 31 OF 78 CA COPYRIGHT 2003 ACS  
AN 135:68543 CA  
TI Method for formation of negative images by imagewise irradiation of  
**infrared** laser  
IN Aoshima, Keitaro  
PA Fuji Photo Film Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 21 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM G03F007-38  
    ICS G03F007-30  
CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reproductive Processes)  
Section cross-reference(s): 35, 38

FAN.CNT 1

| PATENT NO.          | KIND | DATE     | APPLICATION NO. | DATE     |
|---------------------|------|----------|-----------------|----------|
| -----               | ---- | -----    | -----           | -----    |
| PI JP 2001175006    | A2   | 20010629 | JP 1999-362335  | 19991221 |
| PRAI JP 1999-362335 |      | 19991221 |                 |          |

AB Neg. image-forming material consisting of a support having a  
**photosensitive** layer contg. (A) **IR** absorber, (B) radical  
generator, (C) radically polymerizable compd., and (D) binder polymer  
irradiated by imagewise exposure with **IR** laser, 1-20 s heat

ST treatment at 60-120.degree., and aq. alk. development to give neg. images.  
The materials are suitable for digital direct printing plates.

IT digital direct printing plate **photoimaging** compn; IR  
absorber **photopolymer** compn imagewise irradn; neg image  
**photopolymer** compn IR laser

IT Optical materials  
(IR absorbers; formation of neg. images suitable as digital direct printing plates by imagewise IR irradn.)

IT **IR** materials  
(absorbers; formation of neg. images suitable as digital direct printing plates by imagewise IR irradn.)

IT **IR** laser radiation  
**Lithographic** plates  
(formation of neg. images suitable as digital direct printing plates by imagewise IR irradn.)

IT **Photoimaging** materials  
(**photopolymerizable**; formation of neg. images suitable as digital direct printing plates by imagewise IR irradn.)

IT Onium compounds  
RL: TEM (Technical or engineered material use); USES (Uses)  
(radical generator; formation of neg. images suitable as digital direct printing plates by imagewise IR irradn.)

IT 134127-48-3  
RL: TEM (Technical or engineered material use); USES (Uses)  
(IR absorbing agent; formation of neg. images suitable as digital direct printing plates by imagewise IR irradn.)

IT 29570-58-9, Dipentaerythritol hexaacrylate 90216-38-9, Allyl methacrylate-methacrylic acid copolymer  
RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(formation of neg. images suitable as digital direct printing plates by imagewise IR irradn.)

IT 335612-65-2, Victoria pure blue naphthalenesulfonate  
RL: TEM (Technical or engineered material use); USES (Uses)  
(formation of neg. images suitable as digital direct printing plates by imagewise IR irradn.)

IT 262612-33-9  
RL: TEM (Technical or engineered material use); USES (Uses)  
(radical generator; formation of neg. images suitable as digital direct printing plates by imagewise IR irradn.)

L48 ANSWER 32 OF 78 CA COPYRIGHT 2003 ACS  
AN 135:38920 CA  
TI On-press process of **lithographic** plates having **IR**  
laser sensitive mask layer  
IN Teng, Gary Ganghui  
PA USA  
SO U.S., 9 pp.  
CODEN: USXXAM  
DT Patent  
LA English  
IC ICM G03C001-76  
NCL 430270100  
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
FAN.CNT 1

| PATENT NO.          | KIND | DATE     | APPLICATION NO. | DATE     |
|---------------------|------|----------|-----------------|----------|
| PI US 6245481       | B1   | 20010612 | US 1999-416843  | 19991012 |
| PRAI US 1999-416843 |      | 19991012 |                 |          |

AB This patent describes on-press process of a lithog. plate comprising a substrate, a **photosensitive** layer, and a top laser sensitive mask layer. The plate is exposed by first digitally exposing the plate with an **IR** radiation to selectively remove or render transparent to an actinic radiation exposed areas of the mask layer and then overall

exposing the plate with the actinic radiation to cause hardening or solubilization of the **photosensitive** layer in the **IR** laser exposed areas. The exposed plate is processed on a printing press by contacting the plate with ink and/or fountain soln. during initial press operation to remove the mask layer and develop the **photosensitive** layer. Optionally, an ink and/or fountain soln. sol. or dispersible interlayer may be interposed between the mask layer and the **photosensitive** layer.

ST lithog printing plate **IR** laser sensitive mask layer

IT Carbon black, processes

RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(Microlith Black C-K, Unisperse Black C-E 2N; lithog. printing plate comprising **photosensitive** layer and **IR** laser sensitive mask layer)

IT **Lithographic** plates

**Photomasks** (**lithographic** masks)  
(lithog. printing plate comprising **photosensitive** layer and **IR** laser sensitive mask layer)

IT **Photoimaging** materials

(**photopolymerizable**; lithog. printing plate comprising **photosensitive** layer and **IR** laser sensitive mask layer)

IT 67906-42-7, FC 120

RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(FC 120; lithog. printing plate comprising **photosensitive** layer and **IR** laser sensitive mask layer)

IT 60506-81-2, Sartomer SR 399

RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(Sartomer SR 399; lithog. printing plate comprising **photosensitive** layer and **IR** laser sensitive mask layer)

IT 71868-10-5, Irgacure 907

RL: CAT (Catalyst use); USES (Uses)  
(lithog. printing plate comprising **photosensitive** layer and **IR** laser sensitive mask layer)

IT 56-81-5, Glycerol, processes 78-93-3, Methyl ethyl ketone, processes

3599-32-4, **IR**-125 9011-14-7, Neocryl B 728 25085-98-7,  
Cyracure UVR-6110 30621-65-9, Epon-1031 139637-70-0, Airvol 603  
288627-62-3, Rhoplex SG-10M 344346-13-0, Ebecryl RX 8301

RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(lithog. printing plate comprising **photosensitive** layer and **IR** laser sensitive mask layer)

IT 7429-90-5, Aluminum, processes

RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(substrate; lithog. printing plate comprising **photosensitive** layer and **IR** laser sensitive mask layer)

RE.CNT 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Cheema; US 5258263 1993 CA
- (2) Cheng; US 5516620 1996 CA
- (3) Cheng; US 5616449 1997 CA
- (4) Chia; US 5677110 1997 CA
- (5) Damme; US 5922502 1999 CA
- (6) Eames; US 3962513 1976 CA
- (7) Gardner; US 5506090 1996 CA
- (8) Gventer; US 4764213 1988 CA
- (9) Huang; US 4467028 1984 CA
- (10) Le, H; Journal of Imaging Science and Technology 1998, P49 CA
- (11) Lipovac; US 4030417 1977 CA
- (12) Nagasaka; US 5219709 1993 CA

- (13) Nguyen; US 6060217 2000 CA
- (14) Nguyen; US 6132933 2000
- (15) Nowak; US 5379698 1995
- (16) Peterson; US 4020762 1977 CA
- (17) Peterson; US 4132168 1979 CA
- (18) Roberts; US 5874188 1999 CA
- (19) Sanders; US 3997349 1976 CA
- (20) Takeda; US 5858604 1999 CA
- (21) Uraki; US 6031024 2000 CA
- (22) Vaes; US 5456999 1995 CA
- (23) Vermeersch; US 6030750 2000 CA
- (24) Vermeersh; US 6080523 2000 CA
- (25) Zhong; US 5948596 1999 CA

L48 ANSWER 33 OF 78 CA COPYRIGHT 2003 ACS

AN 134:259221 CA

TI **Photopolymerizable** composition and IR laser-sensitive material using it for **lithographic** plates

IN Takasaki, Ryuichiro; Urano, Toshiyoshi

PA Mitsubishi Chemical Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 15 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03F007-029

ICS C08F002-50; G03F007-004; G03F007-027

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

|   | PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE     |
|---|--|------|----------|-----------------|----------|
| PI  | JP 2001075276  | A2   | 20010323 | JP 1999-249482  | 19990903 |
| PRAI  | JP 1999-249482   |      | 19990903 |                 |          |
| OS  | MARPAT 134:259221  |      |          |                 |          |
| AB The compn. contains (A) addn.-polymerizable ethylenically unsatd. compds., (B) IR-absorbing dyes, and (C) org. B complexes A1A2A2A4B-X+ (A1 = alkyl; A2-A4 = arom. group having electron-withdrawing group; X+ = counter cation) as <b>photopolymn.</b> initiators. The IR laser-sensitive material comprises a support coated with the above compn. The compn. shows high sensitivity to IR laser beams to give lithog. printing plates with high resoln. (dot reprodn.) and no stains. |  |      |          |                 |          |
| ST  | IR laser sensitive lithog printing plate; borate complex photopolymn initiator lithog plate  |      |          |                 |          |
| IT  | Lithographic plates<br>(IR laser-sensitive material contg.<br><b>photopolymerizable</b> compn. for lithog. plates)   |      |          |                 |          |
| IT  | Polymerization catalysts<br>(photopolymn., borate complexes; IR laser-sensitive material contg. <b>photopolymerizable</b> compn. for lithog. plates)   |      |          |                 |          |
| IT  | 25086-15-1P, Methacrylic acid-methyl methacrylate copolymer<br>203742-63-6P, Acrylic acid-styrene copolymer ester with (3,4-epoxycyclohexyl)methyl acrylate<br>RL: DEV (Device component use); PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)<br>(IR laser-sensitive material contg.<br><b>photopolymerizable</b> compn. for lithog. plates) |      |          |                 |          |
| IT  | 56361-55-8, A-BPE 4 95971-16-7, UA 306H<br>RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)<br>(IR laser-sensitive material contg.<br><b>photopolymerizable</b> compn. for lithog. plates)  |      |          |                 |          |
| IT  | 193687-63-7 220271-46-5<br>RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)<br>(IR-absorbing dye; IR laser-sensitive material   |      |          |                 |          |

IT contg. photopolymerizable compn. for lithog. plates)  
330804-59-6 330804-60-9  
RL: CAT (Catalyst use); USES (Uses)  
(photopolymn. initiator; IR laser-sensitive  
material contg. photopolymerizable compn. for lithog. plates)

L48 ANSWER 34 OF 78 CA COPYRIGHT 2003 ACS  
AN 134:200564 CA  
TI Photopolymerizable composition containing specific dye for  
light-sensitive lithographic original plate  
IN Urano, Toshiyuki  
PA Mitsubishi Chemical Corporation, Japan  
SO PCT Int. Appl., 59 pp.  
CODEN: PIXXD2  
DT Patent  
LA Japanese  
IC ICM G03F007-028  
ICS C08F002-48; G03F007-031; G03F007-00  
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reproductive Processes)  
Section cross-reference(s): 42

FAN.CNT 1

|      | PATENT NO.   | KIND                   | DATE   | APPLICATION NO. | DATE     |
|------|--|------------------------|--|-----------------|----------|
| PI   | WO 2001014931<br>W: DE, US   | A1                     | 20010301   | WO 2000-JP5588  | 20000821 |
|      | JP 2002023361  | A2                     | 20020123   | JP 2000-200400  | 20000703 |
|      | JP 2002023362  | A2                     | 20020123   | JP 2000-207841  | 20000710 |
|      | JP 2002090989  | A2                     | 20020327   | JP 2000-250764  | 20000822 |
|      | US 2002114966  | A1                     | 20020822   | US 2002-79408   | 20020222 |
| PRAI | JP 1999-235216<br>JP 2000-200400<br>JP 2000-207841<br>JP 2000-207842<br>WO 2000-JP5588 | A<br>A<br>A<br>A<br>A1 | 19990823<br>20000703<br>20000710<br>20000710<br>20000821 |                 |          |

OS MARPAT 134:200564  
AB The photopolymerizable compn. for a light-sensitive lithog. original plate comprises a layer of contg.: (A) An ethylenic compd. (B) a dye selected from the group consisting of the dyes, which each has a basic structure comprising heteroatoms bonded to each other through a polymethine chain and has a specific substituent on the polymethine chain or on another basic structure; and (C) A photopolymn. initiator on a support. The photopolymerizable compn. contg. the dye is highly sensitive to light not only in the visible region but in long-wavelength regions including the near IR region and not sensitive to light in the UV region and shows the excellent handling characteristics under daylight fluorescent lamps.

ST photopolymerizable compn lithog original plate

IT Dyes

(dye in photopolymerizable compn. for  
photopolymerizable lithog. original plate)

IT Light-sensitive materials

Lithographic plates

(photopolymerizable compn. for photopolymerizable  
lithog. original plate)

IT 328063-81-6 328063-88-3 328063-95-2 328064-01-3 328064-07-9

328064-13-7 328064-16-0 328064-20-6

RL: TEM (Technical or engineered material use); USES (Uses)

(dye in photopolymerizable compn. for  
photopolymerizable lithog. original plate)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Fuji Photo Film Co Ltd; JP 11119421 A 1999 CA

(2) Konica Corporation; JP 08114916 A 1996 CA

(3) Mitsubishi Chemical Corporation; JP 11119428 A 1999 CA

L48 ANSWER 35 OF 78 CA COPYRIGHT 2003 ACS  
AN 134:11472 CA  
TI Photopolymerizing composition, photopolymerizing  
image-forming material, and negative image formation  
IN Takasaki, Ryuichiro  
PA Mitsubishi Chemical Corp., Japan  
SO Jpn. Kokai Tokkyo Koho, 20 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM G03F007-028  
ICS C08F002-44; C08F002-50; G02B005-20; G03F007-004; G03F007-027;  
G03F007-032; G03F007-32  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)  
FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 2000321766  | A2   | 20001124 | JP 1999-131148  | 19990512 |
| PRAI | JP 1999-131148 |      | 19990512 |                 |          |

AB The title photopolymg. compn. contains an ethylenic unsatd. compd., an IR-absorbing dye that generates no active radical, and a .alpha.-aminoacetophenone deriv. The image-forming material comprises a support coated with a photosensitive layer made of the compn. and is imagewise exposed using an IR laser beam in a quantity of exposure of .ltoreq.500 mJ/cm<sup>2</sup> and developed with an aq. alkali soln. to form a neg. image. The compn. shows high sensitivity toward light in the IR region, esp. IR laser beams, and is capable of direct imaging using semiconductor and YAG lasers.

ST IR absorbent photoresist; presensitized lithog plate  
IR absorbent; ethylenic compd aminoacetophenone  
photosensitive compn

IT Optical materials  
(IR absorbers; IR-sensitive lithog plate compn.  
contg. ethylenic compd., IR absorbent, and aminoacetophenone  
deriv.)

IT Negative photoresists  
(IR-sensitive compn. contg. ethylenic compd., IR  
absorbent, and aminoacetophenone deriv.)

IT IR materials  
(absorbers; IR-sensitive lithog plate compn. contg. ethylenic  
compd., IR absorbent, and aminoacetophenone deriv.)

IT Polyurethanes, uses  
RL: DEV (Device component use); TEM (Technical or engineered material  
use); USES (Uses)  
(acrylates; IR-sensitive lithog plate compn. contg. ethylenic  
compd., IR absorbent, and aminoacetophenone deriv.)

IT Lithographic plates  
(presensitized; IR-sensitive compn. contg. ethylenic compd.,  
IR absorbent, and aminoacetophenone deriv.)

IT 278792-10-2 278792-39-5  
RL: DEV (Device component use); TEM (Technical or engineered material  
use); USES (Uses)  
(IR absorbent; IR-sensitive lithog plate compn.  
contg. ethylenic compd., IR absorbent, and aminoacetophenone  
deriv.)

IT 24447-78-7 25085-34-1D, Acrylic acid-styrene copolymer, reaction  
products with epoxycyclohexylmethyl acrylate 29570-58-9,  
Dipentaerythritol hexaacrylate 64630-63-3D, 3,4-Epoxycyclohexylmethyl  
acrylate, reaction products with acrylic acid-styrene copolymer  
95971-16-7, UA 306H  
RL: DEV (Device component use); TEM (Technical or engineered material  
use); USES (Uses)  
(IR-sensitive lithog plate compn. contg. ethylenic compd.,

IR absorbent, and aminoacetophenone deriv.)

IT 119313-12-1  
RL: DEV (Device component use); MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
(IRG 369; IR-sensitive lithog plate compn. contg. ethylenic compd., IR absorbent, and aminoacetophenone deriv.)

L48 ANSWER 36 OF 78 CA COPYRIGHT 2003 ACS  
AN 133:342516 CA  
TI Photopolymerization composition and printing plate containing it  
IN Takasaki, Ryuichiro; Urano, Toshiyoshi  
PA Mitsubishi Chemical Corp., Japan  
SO Jpn. Kokai Tokkyo Koho, 26 pp.  
CODEN: JKXXAF

DT Patent  
LA Japanese  
IC ICM G03F007-004  
ICS C08F020-36; G03F007-00; G03F007-027; G03F007-029  
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 5

|      | PATENT NO.        | KIND | DATE     | APPLICATION NO. | DATE     |
|------|-------------------|------|----------|-----------------|----------|
| PI   | JP 2000305262     | A2   | 20001102 | JP 1999-360592  | 19991220 |
| PRAI | JP 1999-41667     | A    | 19990219 |                 |          |
| OS   | MARPAT 133:342516 |      |          |                 |          |

AB The compn. consists of an ethylenically unsatd. amine with an acryloyloxyalkyl and/or a phosphate with (meth)acryloyloxyalkyl, a phthalocyanine IR absorbing dye, and a polymn. initiator. The printing plate comprises an anodized Al support having thereon a layer contg. the obtained compn. The plate provides images with high resolving power, suitable for IR laser scanning exposure.

ST photopolymn compn acryloyloxyalkyl amine phosphate printing plate; phthalocyanine IR absorber photoresist presensitized lithog plate

IT Optical materials  
Optical materials  
(IR absorbers, phthalocyanine dyes; ethylenically unsatd. amine or phosphate in photopolymn. compn. for IR laser scanning-type printing plate)

IT Dyes  
IR materials  
IR materials  
(absorbers, phthalocyanine dyes; ethylenically unsatd. amine or phosphate in photopolymn. compn. for IR laser scanning-type printing plate)

IT Photoresists  
(ethylenically unsatd. amine or phosphate in photopolymn. compn. for IR laser scanning-type printing plate)

IT Lithographic plates  
(presensitized; ethylenically unsatd. amine or phosphate in photopolymn. compn. for IR laser scanning-type printing plate)

IT 278792-10-2 278792-39-5  
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)  
(dye; ethylenically unsatd. amine or phosphate in photopolymn. compn. for IR laser scanning-type printing plate)

IT 24305-03-1 32435-46-4, Bis(methacryloyloxyethyl)phosphate 52628-03-2, Methacryloyloxyethylphosphate 56361-55-8 77001-81-1  
RL: DEV (Device component use); USES (Uses)  
(ethylenically unsatd. amine or phosphate in photopolymn. compn. for IR laser scanning-type printing plate)

IT 120307-06-4 303957-45-1  
RL: CAT (Catalyst use); DEV (Device component use); USES (Uses)

(polymn. initiator; ethylenically unsatd. amine or phosphate in  
photopolymn. compn. for IR laser scanning-type  
printing plate)  
IT 7429-90-5, Aluminum, uses  
RL: DEV (Device component use); USES (Uses)  
(supports; ethylenically unsatd. amine or phosphate in  
photopolymn. compn. for IR laser scanning-type  
printing plate)

L48 ANSWER 37 OF 78 CA COPYRIGHT 2003 ACS  
AN 133:327689 CA  
TI Photosensitive composition and presensitized  
lithographic plate using same  
IN Urano, Toshiyoshi; Minakami, Junji  
PA Mitsubishi Chemical Corp., Japan  
SO Jpn. Kokai Tokkyo Koho, 20 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM G03F007-038  
ICS C08L057-00; C08L061-06; G03F007-00  
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)  
FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 2000298342  | A2   | 20001024 | JP 1999-106714  | 19990414 |
| PRAI | JP 1999-106714 |      | 19990414 |                 |          |

OS MARPAT 133:327689

AB The title **photosensitive** compn. contains a near IR  
ray-absorbing dye having a structure in which atoms other than C link  
through a polymethine chain having an iminium salt group as a substituent.  
The presensitized lithog. plate comprises a support coated with a  
**photosensitive** layer made of the compn. The compn. shows high  
sensitivity toward light in near IR regions.

ST presensitized lithog plate near IR absorbent; cyanine dye  
iminium group IR absorbent

IT Optical materials  
Optical materials

(IR absorbers; **photosensitive** compn. contg. near  
IR absorbent of cyanine dye with iminium group)

IT IR materials  
IR materials  
(absorbers; **photosensitive** compn. contg. near IR  
absorbent of cyanine dye with iminium group)

IT Phenolic resins, uses  
RL: DEV (Device component use); USES (Uses)  
(novolak; **photosensitive** compn. contg. near IR  
absorbent of cyanine dye with iminium group)

IT Lithographic plates  
(presensitized; **photosensitive** compn. contg. near IR  
absorbent for presensitized lithog. plate)

IT 3584-23-4, 2-(p-Methoxyphenyl)-4,6-bis(trichloromethyl)-s-triazine  
220651-99-0

RL: CAT (Catalyst use); USES (Uses)  
(**photopolymn.** initiator; **photosensitive** compn.  
contg. near IR absorbent of cyanine dye with iminium group)

IT 15625-89-5, Trimethylolpropane triacrylate 35464-74-5,  
m-Cresol-p-cresol-formaldehyde-phenol copolymer 302783-19-3  
RL: DEV (Device component use); USES (Uses)  
(**photosensitive** compn. contg. near IR absorbent of  
cyanine dye with iminium group)

L48 ANSWER 38 OF 78 CA COPYRIGHT 2003 ACS  
AN 133:96833 CA

TI Presensitized lithographic plate containing phthalocyanine as infrared ray absorbent  
IN Takasaki, Ryuichiro  
PA Mitsubishi Chemical Corp., Japan  
SO Jpn. Kokai Tokkyo Koho, 19 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM G03F007-00  
ICS C08F291-00; C08L051-00; G03F007-004  
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 5

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 2000194124  | A2   | 20000714 | JP 1998-370218  | 19981225 |
|      | US 6232038     | B1   | 20010515 | US 1999-412979  | 19991006 |
|      | US 2001007736  | A1   | 20010712 | US 2000-739272  | 20001219 |
|      | US 6544720     | B2   | 20030408 |                 |          |
| PRAI | JP 1998-285043 | A    | 19981007 |                 |          |
|      | JP 1998-293400 | A    | 19981015 |                 |          |
|      | JP 1998-370218 | A    | 19981225 |                 |          |
|      | JP 1998-370219 | A    | 19981225 |                 |          |
|      | JP 1999-41667  | A    | 19990219 |                 |          |
|      | US 1999-412979 | A1   | 19991006 |                 |          |

AB The plate comprises a support having thereon a photosensitive layer contg. an alkali sol. resin, an ethylenically unsatd. double bonded compd., an IR absorbing phthalocyanine dye, and a polymn. initiator. It shows improved resolving power, developability, adhesion, storage stability, and roomlight handling adaptability.

ST presensitized lithog plate phthalocyanine IR absorbent; org borate photopolymn initiator presensitized lithog

IT Optical materials  
Optical materials

(IR absorbers; presensitized lithog. plate contg. alkali-sol. resin, ethylenic compd., polymn. catalyst, and phthalocyanine IR absorbent)

IT IR materials

IR materials  
(absorbers; presensitized lithog. plate contg. alkali-sol. resin, ethylenic compd., polymn. catalyst, and phthalocyanine IR absorbent)

IT Lithographic plates

(presensitized; presensitized lithog. plate contg. alkali-sol. resin, ethylenic compd., polymn. catalyst, and phthalocyanine IR absorbent)

IT 120307-06-4, Tetrabutylammonium butyltriphenylborate

RL: CAT (Catalyst use); USES (Uses)  
(presensitized lithog. plate contg. alkali-sol. resin, ethylenic compd., polymn. catalyst, and phthalocyanine IR absorbent)

IT 822-06-0 3524-68-3 29570-58-9, Dipentaerythritol hexaacrylate  
282096-81-5

RL: DEV (Device component use); USES (Uses)  
(presensitized lithog. plate contg. alkali-sol. resin, ethylenic compd., polymn. catalyst, and phthalocyanine IR absorbent)

IT 203742-63-6P, Acrylic acid-styrene copolymer ester with

(3,4-epoxycyclohexyl)methyl acrylate

RL: DEV (Device component use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)  
(presensitized lithog. plate contg. alkali-sol. resin, ethylenic compd., polymn. catalyst, and phthalocyanine IR absorbent)

L48 ANSWER 39 OF 78 CA COPYRIGHT 2003 ACS

AN 133:81597 CA

TI Positive-working photosensitive composition for IR ray

lasers  
 IN Kimura, Takeshi; Fujita, Osamu  
 PA Fuji Photo Film Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 20 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM G03F007-027  
 ICS B41N001-14; G03F007-004; G03F007-023  
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 38  
 FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 2000187318  | A2   | 20000704 | JP 1998-364091  | 19981222 |
| PRAI | JP 1998-364091 |      | 19981222 |                 |          |

AB The title **photosensitive** compn. contains (a) a substance which absorbs light to generate heat, (b) an aq. alkali soln.-sol. polymer having phenolic OH group(s), and (c) a polymer comprising (meth)acrylate monomers having 2 or 3 C3-20 perfluoroalkyl groups in their mols. The compns. may optionally contain copolymers contg. .gtoreq.10 mol% of .gtoreq.1 monomers selected from (1) a monomer having sulfonamide groups having .gtoreq.1 H atom bonded onto N in a mol., (2) a monomer having an active imino group C(O)NHSO<sub>2</sub>, and (3) hydroxystyrene, and (meth)acrylamide and (meth)acrylic acid esters having phenolic OH group(s). The compn. is capable of direct platemaking from digital signals and provides high quality images with improved discrimination and shows improved development latitude.  
 ST IR laser pos **photosensitive** compn platemaking;  
 fluoroacrylic polymer pos **photosensitive** compn  
 IT Fluoropolymers, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (acrylic; pos.-working **photosensitive** compn. for platemaking  
 with IR ray lasers)  
 IT Phenolic resins, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (novolak, cresol-based; pos.-working **photosensitive** compn.  
 for platemaking with IR ray lasers)  
 IT Lithographic plates  
 (offset; pos.-working **photosensitive** compn. for platemaking  
 with IR ray lasers)  
 IT Photoimaging materials  
 (**photopolymerizable**, S; pos.-working **photosensitive**  
 compn. for platemaking with IR ray lasers)  
 IT 56992-87-1P, N-(p-Aminosulfonylphenyl)methacrylamide  
 RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation);  
 RACT (Reactant or reagent)  
 (pos.-working **photosensitive** compn. for platemaking with  
 IR ray lasers)  
 IT 124996-93-6P, Acrylonitrile-N-(p-aminosulfonylphenyl)methacrylamide-ethyl  
 methacrylate copolymer  
 RL: PNU (Preparation, unclassified); TEM (Technical or engineered material  
 use); PREP (Preparation); USES (Uses)  
 (pos.-working **photosensitive** compn. for platemaking with  
 IR ray lasers)  
 IT 63-74-1, p-Aminobenzenesulfonamide 79-41-4, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (pos.-working **photosensitive** compn. for platemaking with  
 IR ray lasers)  
 IT 117283-53-1, Victoria pure blue BOH 1-naphthalenesulfonate 134127-48-3  
 279681-09-3  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (pos.-working **photosensitive** compn. for platemaking with  
 IR ray lasers)

L48 ANSWER 40 OF 78 CA COPYRIGHT 2003 ACS  
AN 133:81588 CA  
TI **Photosensitive** composition, image-forming material, and image formation using same  
IN Takasaki, Ryuichiro  
PA Mitsubishi Chemical Industries Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 27 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM G03F007-029  
ICS C08F002-50; C08L101-16; C09B067-20; G03F007-00; G03F007-027  
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 38  
FAN.CNT 5

|      | PATENT NO.       | KIND | DATE     | APPLICATION NO. | DATE     |
|------|------------------|------|----------|-----------------|----------|
| PI   | JP 2000181059    | A2   | 20000630 | JP 1999-282875  | 19991004 |
| PRAI | JP 1998-285043   | A    | 19981007 |                 |          |
| OS   | MARPAT 133:81588 |      |          |                 |          |

AB The title **photosensitive** compn. contains (a) an ethylenic unsatd. double bond-contg. compd., (b) a phthalocyanine compd. having an absorption max. in the wavelength range of 750-1200 nm as a sensitizing dye, and (c) a **photopolymer** initiator. The image-forming material possesses a **photosensitive** layer made of the compn. on a substrate and is imagewise exposed using an **IR** laser in the range of 780-1200 nm and processed with an alk. developing soln. to form images. The compn. capable of direct imaging from digital signals using laser scanning exposure shows high sensitivity toward **IR** rays and stability under safelight.

ST presensitized lithog plate **IR** laser; phthalocyanine sensitizer presensitized lithog plate; org borate **photopolymer** initiator lithog plate

IT **Lithographic plates**  
(presensitized; presensitized lithog. plate contg. ethylenic compd., phthalocyanine sensitizer, and **photopolymer** initiator)

IT 120307-06-4, Tetrabutylammonium butyltriphenylborate 182813-95-2  
278792-12-4

RL: CAT (Catalyst use); USES (Uses)  
(presensitized lithog. plate contg. ethylenic compd., phthalocyanine sensitizer, and **photopolymer** initiator)

IT 29570-58-9, DPBA 95971-16-7, UA 306H 97366-70-6 140890-32-0  
278792-10-2 278792-37-3 278792-38-4 278792-39-5 278792-40-8

RL: DEV (Device component use); USES (Uses)  
(presensitized lithog. plate contg. ethylenic compd., phthalocyanine sensitizer, and **photopolymer** initiator)

IT 65697-21-4P, Benzyl methacrylate-methacrylic acid copolymer  
203742-63-6P, Acrylic acid-styrene copolymer ester with  
3,4-epoxycyclohexylmethyl acrylate

RL: DEV (Device component use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)  
(presensitized lithog. plate contg. ethylenic compd., phthalocyanine sensitizer, and **photopolymer** initiator)

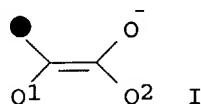
L48 ANSWER 41 OF 78 CA COPYRIGHT 2003 ACS

AN 132:341204 CA  
TI **Photopolymerizable** composition and **lithographic** printing plate and image formation method using it  
IN Urano, Toshiyoshi; Nagao, Takumi; Hino, Etsuko  
PA Mitsubishi Chemical Industries Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 20 pp.  
CODEN: JKXXAF  
DT Patent

LA Japanese  
IC ICM G03F007-027  
ICS C08F002-48; G03F007-00; G03F007-004; G03F007-028  
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 27

FAN.CNT 1

|      | PATENT NO.        | KIND | DATE     | APPLICATION NO. | DATE     |
|------|-------------------|------|----------|-----------------|----------|
| PI   | JP 2000131837     | A2   | 20000512 | JP 1999-227083  | 19990811 |
|      | US 6153356        | A    | 20001128 | US 1999-374846  | 19990816 |
| PRAI | JP 1998-230373    | A    | 19980817 |                 |          |
| OS   | MARPAT 132:341204 |      |          |                 |          |
| GI   |                   |      |          |                 |          |



AB The title compn. contains (A) ethylenically unsatd. compd., (B) cyanine dye, and (C) photopolymer. initiator. In the compn., the cyanine dye has a structure in which heteroatoms (O, S, or N) are connected by polymethine chains having  $\geq 1$  substituent I ( $Q_1, Q_2 =$  substituents;  $Q_1$  may connect with  $Q_2$  to form a ring). Preferably, the substituent I is (thio)barbituric acid group. The lithog. printing plate has a layer of the photopolymerizable compn. on a support, and the layer is exposed to light at 700-1300 nm and developed with an alkali soln. for image formation. The photopolymerizable compn. has high sensitivity to visible light and near-IR light.

ST cyanine dye photopolymerizable compn lithog printing plate; visible light sensitivity cyanine dye photopolymerizable compn; near IR light sensitivity cyanine dye photopolymerizable compn

IT Cyanine dyes

Lithographic plates

Photoresists

(photopolymerizable compn. contg. cyanine dye for sensitivity to visible light and near-IR light for lithog. printing plate)

IT 259133-57-8 259133-58-9

RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)

(photopolymerizable compn. contg. cyanine dye for sensitivity to visible light and near-IR light for lithog. printing plate)

L48 ANSWER 42 OF 78 CA COPYRIGHT 2003 ACS

AN 132:258189 CA

TI Near-IR sensitive polymerizable composition for lithographic plate

IN Urano, Toshiyoshi; Hino, Etsuko

PA Mitsubishi Chemical Industries Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 37 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03F007-027

ICS C08F002-50; G03F007-00; G03F007-004; G03F007-028; G03F007-031

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

|           | PATENT NO.  | KIND                                      | DATE   | APPLICATION NO.                  | DATE     |
|-----------|---|---|--|----------------------------------|----------|
| PI        | JP 2000098603   | A2  | 20000407                                       | JP 1998-272845                   | 19980928 |
| PRAI      | JP 1998-272845  |   | 19980928                                       |                                  |          |
| AB        | The near-IR sensitive polymerizable compn. for lithog. plate has an ethylenic unsatd. compd., a cyanine dye cation with heterocyclic rings connected through a polymethylene chain, an org. borate anion, and an aliph. amino acid, an aliph. amino acid ester, or a dipole ion of aliph. amino acid or the ester. The compn. provides the high sensitivity towards near-IR light, the excellent stability over time, and the insensitivity towards UV light. |   |  |                                  |          |
| ST        | near IR sensitive photopolymerizable compn lithog plate   |   |  |                                  |          |
| IT        | <b>Lithographic plates</b><br>(near-IR sensitive photopolymerizable compn. for lithog. plate)   |   |  |                                  |          |
| IT        | 103-01-5, N-Phenylglycine   | 21911-84-2                                | 24305-03-1                                     | 47252-39-1                       |          |
|           | 62750-11-2  | 64401-02-1                                | 77001-81-1                                     | 117522-01-7, Tetramethylammonium |          |
|           | n-butyltriphenylborate  | 191726-37-1                               | 193687-62-6                                    | 193687-63-7                      |          |
|           | RL: TEM (Technical or engineered material use); USES (Uses)<br>(near-IR sensitive photopolymerizable compn.)  |   |  |                                  |          |
| L48       | ANSWER 43 OF 78 CA COPYRIGHT 2003 ACS   |   |  |                                  |          |
| AN        | 132:258188 CA   |   |  |                                  |          |
| TI        | Near-IR sensitive photopolymerizable composition for lithographic plate   |   |  |                                  |          |
| IN        | Urano, Toshiyoshi; Hino, Etsuko   |   |  |                                  |          |
| PA        | Mitsubishi Chemical Industries Ltd., Japan  |   |  |                                  |          |
| SO        | Jpn. Kokai Tokkyo Koho, 29 pp.<br>CODEN: JKXXAF   |   |  |                                  |          |
| DT        | Patent  |   |  |                                  |          |
| LA        | Japanese  |   |  |                                  |          |
| IC        | ICM G03F007-027<br>ICS C08F002-48; C08F220-26; C08F220-36; C08F226-00; C08F230-06;<br>G03F007-00; G03F007-039   |   |  |                                  |          |
| CC        | 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)<br>Section cross-reference(s): 35   |   |  |                                  |          |
| FAN.CNT 1 |   |   |  |                                  |          |
|           | PATENT NO.  | KIND                                      | DATE   | APPLICATION NO.                  | DATE     |
| PI        | JP 2000098602   | A2  | 20000407                                       | JP 1998-269502                   | 19980924 |
| PRAI      | JP 1998-269502  |   | 19980924                                       |                                  |          |
| AB        | The near-IR sensitive photopolymerizable compn. for lithog. plate has compds. of: (A) an ethylenic unsatd. group-contg. amine compd. or phosphate with (meth)acyloxy alkyl group; (B-1) a cyanine dye cation of heterocyclic rings connected with polymethylene chain; (B-2) an org. boric anion. The compn. provides the high sensitivity towards near-IR light, the excellent stability over time, and the insensitivity towards UV-light.                  |   |  |                                  |          |
| ST        | near IR sensitive photopolymerizable compn lithog plate   |   |  |                                  |          |
| IT        | <b>Lithographic plates</b><br>(near-IR sensitive photopolymerizable compn. for lithog. plate)   |   |  |                                  |          |
| IT        | 24305-03-1  | 24447-78-7                                | 32435-46-4, Bis(methacryloyloxyethyl)phosphate |                                  |          |
|           | 47252-39-1  | 52628-03-2, Methacryloyloxyethylphosphate | 77001-81-1                                     |                                  |          |
|           | 117522-01-7, Tetramethylammonium  | n-butyltriphenylborate                    | 191726-37-1                                    |                                  |          |
|           | 193687-62-6   | 193687-63-7                               | 262597-11-5                                    |                                  |          |
|           | RL: TEM (Technical or engineered material use); USES (Uses)<br>(near-IR sensitive photopolymerizable compn.)  |   |  |                                  |          |
| L48       | ANSWER 44 OF 78 CA COPYRIGHT 2003 ACS   |   |  |                                  |          |
| AN        | 132:258177 CA   |   |  |                                  |          |
| TI        | Photopolymerizable image-forming material for lithographic plate  |   |  |                                  |          |

IN Urano, Toshiyoshi; Hino, Etsuko; Nagao, Takumi  
 PA Mitsubishi Chemical Industries Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 30 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM G03F007-027  
 ICS G03F007-00; G03F007-029; G03F007-09  
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

|      | PATENT NO.        | KIND | DATE     | APPLICATION NO. | DATE     |
|------|-------------------|------|----------|-----------------|----------|
| PI   | JP 2000089455     | A2   | 20000331 | JP 1998-257893  | 19980911 |
| PRAI | JP 1998-257893    |      | 19980911 |                 |          |
| OS   | MARPAT 132:258177 |      |          |                 |          |

AB The title image-forming material possesses, on a support having a surface where the gum-tape pressure-stuck thereon shows a peeling strength of .1toreq.500 g/cm, a layer made of a photopolymer. compn. contg. (i) an ethylenic unsatd. compd., a cyanine dye cation in which heterocycles link via a polymethine chain, and an org. B anion or (ii) an ethylenic unsatd. compd., a salt of the cyanine dye cation and a counter anion other than org. B anion, and a halomethyl-contg. compd. The material shows high sensitivity toward near IR region and non-sensitive to UV region, good storage stability, and processability under white fluorescent light.

ST IR sensitive lithog plate cyanine dye; org boron compd presensitized lithog plate; ethylenic compd presensitized lithog plate; halomethyl compd photopolymerizable compn

IT Lithographic plates

(presensitized; presensitized lithog. plate contg. ethylenic compd., cyanine dye, and org. boron compd. or halomethyl compd.)

IT 949-42-8 3584-23-4, 2-(p-Methoxyphenyl)-4,6-bis(trichloromethyl)-s-triazine 24305-03-1 32435-46-4, Bis(methacryloyloxyethyl) phosphate 42573-57-9, 2-(p-Methoxystyryl)-4,6-bis(trichloromethyl)-s-triazine 52628-03-2, Methacryloyloxyethyl phosphate 69432-40-2 77001-81-1 91105-84-9 117522-01-7, Tetramethylammonium butyltriphenylborate 119235-84-6 191726-37-1, Tetramethylammonium butyltris(2,6-difluorophenyl)borate 193687-63-7 211796-67-7 211796-69-9 219537-49-2 220271-46-5 262380-41-6

RL: DEV (Device component use); USES (Uses)  
(presensitized lithog. plate contg. ethylenic compd., cyanine dye, and org. boron compd. or halomethyl compd.)

L48 ANSWER 45 OF 78 CA COPYRIGHT 2003 ACS

AN 132:173430 CA

TI Photosensitive printing original plate and production of printing plate therefrom

IN Satomi, Hiroshi; Imahashi, Satoshi  
 PA Toyobo Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03F007-00

ICS G03F007-038; G03F007-38

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 2000056447  | A2   | 20000225 | JP 1998-223182  | 19980806 |
| PRAI | JP 1998-223182 |      | 19980806 |                 |          |

AB The title original plate comprises a support coated successively with (1) a photopolymer. layer contg. an elastomer binder, an ethylenic

unsatd. compd., and a **photopolymer**. initiator sensitive toward activating rays other than IR ray, (2) a mask-forming layer that becomes opaque toward non-IR activating ray substantially by irradn. with IR rays, and (3) an optional cover film. The original plate is imagewise exposed to an IR ray laser beam after peeling the cover film off, uniformly exposed to a non-IR activating ray using the mask-forming layer as a mask, and developed with a developing soln. to remove the mask-forming layer and the areas of the **photopolymer** layer that have not been exposed to the non-IR activating ray to give a printing plate. The original plate has a layer capable of forming a mask without development by using IR ray laser beams and a flexog. printing plate is obtained therefrom by aq. development following exposure to non-IR rays.

ST IR sensitive mask forming layer; presensitized lithog plate  
elastomer **photosensitive** layer

IT Urethane rubber, preparation  
RL: DEV (Device component use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)  
(copolymers; **photosensitive** printing plate comprising IR-sensitive mask-forming layer and non-IR active ray-sensitive layer)

IT Chlorinated polyethylene rubber  
Styrene-butadiene rubber, uses  
RL: DEV (Device component use); USES (Uses)  
(**photosensitive** printing plate comprising IR-sensitive mask-forming layer and non-IR active ray-sensitive layer)

IT Nitrile rubber, preparation  
RL: DEV (Device component use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)  
(piperazine group-terminated, copolymers; **photosensitive** printing plate comprising IR-sensitive mask-forming layer and non-IR active ray-sensitive layer)

IT **Lithographic plates**  
(presensitized; **photosensitive** printing plate comprising IR-sensitive mask-forming layer and non-IR active ray-sensitive layer)

IT 9002-88-4D, chlorinated  
RL: DEV (Device component use); USES (Uses)  
(chlorinated polyethylene rubber, **photosensitive** printing plate comprising IR-sensitive mask-forming layer and non-IR active ray-sensitive layer)

IT 80-05-7, Bisphenol A, uses 29512-49-0 115970-62-2, Kayasorb CY 17  
253141-09-2, Kayasorb IRG 820B  
RL: DEV (Device component use); USES (Uses)  
(mask-forming layer; **photosensitive** printing plate comprising IR-sensitive mask-forming layer and non-IR active ray-sensitive layer)

IT 9003-18-3P  
RL: DEV (Device component use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)  
(nitrile rubber, piperazine group-terminated, copolymers;  
**photosensitive** printing plate comprising IR-sensitive mask-forming layer and non-IR active ray-sensitive layer)

IT 822-06-0D, Hexamethylene diisocyanate, copolymers with acrylic compd., alc., and rubber 868-77-9D, copolymers with acrylic compd., isocyanate, and rubber 4767-03-7D, Dimethylolpropionic acid, copolymers with acrylic compd., isocyanate, and rubber 25190-06-1D, G 850, copolymers with acrylic compd., isocyanate, and rubber 205537-69-5, ABU  
RL: DEV (Device component use); USES (Uses)  
(**photosensitive** printing plate comprising IR-sensitive mask-forming layer and non-IR active ray-sensitive layer)

IT 9003-55-8  
RL: DEV (Device component use); USES (Uses)

(styrene-butadiene rubber, photosensitive printing plate comprising IR-sensitive mask-forming layer and non-IR active ray-sensitive layer)

L48 ANSWER 46 OF 78 CA COPYRIGHT 2003 ACS  
AN 132:144427 CA  
TI Platemaking of lithographic plate using inner drum plate setter  
IN Azuma, Tatsushi; Okamoto, Yasuo; Sorori, Tadahiro  
PA Fuji Photo Film Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 20 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM G03F007-20  
ICS G03F007-00; G03F007-028  
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
FAN.CNT 1

| PATENT NO.          | KIND | DATE     | APPLICATION NO. | DATE     |
|---------------------|------|----------|-----------------|----------|
| JP 2000035673       | A2   | 20000202 | JP 1998-203623  | 19980717 |
| PRAI JP 1998-203623 |      | 19980717 |                 |          |

AB The title process comprises exposing a lithog. plate possessing a laser-photosensitive recording layer on an Al support by using an inner drum-type plate setter using a semiconductor laser beam in the region from UV to visible rays (360-450 nm). High quality images without fog are obtained by using the plate setter and the processability under yellow light is improved.  
ST lithog platemaking inner drum plate setter; laser beam lithog platemaking photopolymer initiator  
IT Lithographic plates  
IT (lithog. platemaking using inner drum plate setter using laser beam)  
IT Polymerization catalysts  
IT (photopolymer.; lithog. platemaking using inner drum plate setter using laser beam)  
IT 104005-37-0, A-Cure 4  
IT RL: CAT (Catalyst use); USES (Uses)  
IT (A-Cure 4; lithog. platemaking using inner drum plate setter using laser beam)  
IT 141946-28-3, ARKLS 1717  
IT RL: CAT (Catalyst use); USES (Uses)  
IT (ARKLS 1717; lithog. platemaking using inner drum plate setter using laser beam)  
IT 125749-28-2, BAPO  
IT RL: CAT (Catalyst use); USES (Uses)  
IT (BAPO; lithog. platemaking using inner drum plate setter using laser beam)  
IT 24650-42-8, IR 651  
IT RL: CAT (Catalyst use); USES (Uses)  
IT (IR 651; lithog. platemaking using inner drum plate setter using laser beam)  
IT 71868-10-5, IR 907  
IT RL: CAT (Catalyst use); USES (Uses)  
IT (IR 907; lithog. platemaking using inner drum plate setter using laser beam)  
IT 41295-28-7, Kayacure MBP  
IT RL: CAT (Catalyst use); USES (Uses)  
IT (Kayacure MBP; lithog. platemaking using inner drum plate setter using laser beam)  
IT 90-93-7, EAB 91-44-1, Coumarin 1 119-61-9, Benzophenone, uses 486-25-9, Fluorenone 10287-53-3, Kayacure EPA 21245-01-2, Kayacure DMBI 32760-80-8, CG 24-61 41175-45-5, Coumarin 106 53518-14-2, Coumarin 152 53518-16-4, Coumarin 340 55804-70-1, Coumarin 307 60536-19-8, N-Butylacridone 82799-44-8, Kayacure DETX 115168-59-7 125051-32-3, CGI 784 256471-51-9, PM 811

RL: CAT (Catalyst use); USES (Uses)  
     (lithog. platemaking using inner drum plate setter using laser beam)  
 IT 4986-89-4, Tetramethylolmethane tetraacrylate 29570-58-9,  
     Dipentaerythritol hexaacrylate 65697-21-4, Benzyl methacrylate-  
     methacrylic acid copolymer 90216-38-9, Allyl methacrylate-methacrylic  
     acid copolymer  
 RL: DEV (Device component use); TEM (Technical or engineered material  
     use); USES (Uses)  
     (lithog. platemaking using inner drum plate setter using laser beam)  
 IT 811-32-5  
 RL: CAT (Catalyst use); USES (Uses)  
     (lophine dimer; lithog. platemaking using inner drum plate setter using  
     laser beam)

L48 ANSWER 47 OF 78 CA COPYRIGHT 2003 ACS  
 AN 132:129957 CA  
 TI **Lithographic** printing plate containing  
     **photopolymerizable** monomer/prepolymer and **photothermal**  
     conversion agent and its manufacture  
 IN Kojima, Yasuo; Hiraoka, Saburo; Kuroki, Takaaki  
 PA Konica Co., Japan  
 SO Jpn. Kokai Tokkyo Koho, 11 pp.  
     CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM G03F007-00  
     ICS B41M001-06; B41N001-14; G03F007-004; G03F007-027; G03F007-028  
 CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other  
     Reprographic Processes)

FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 2000035661  | A2   | 20000202 | JP 1998-204995  | 19980721 |
| PRAI | JP 1998-204995 |      | 19980721 |                 |          |

AB The plate comprises a substrate having thereon a layer contg. a  
     hydrophilic self-film-forming filler, a **photopolymerizable**  
     lipophilic thermoplastic monomer/prepolymer, a polymn. initiator, and a  
     **photothermal** conversion agent and a layer contg. a hydrophilic  
     binder in succession. The plate is manufd. by overall exposing by active  
     light after imagewise exposure by high-intensity light with absorption  
     wavelength of the **photothermal** conversion agent to increase mol.  
     wt. of the monomer/prepolymer. The plate shows improved printability,  
     preventing stains in nonimage areas, pressure fog, finger prints, and  
     blanket stains.

ST lithog printing plate lipophilic thermoplastic resin hydrophilic binder  
 IT Silica gel, uses  
     RL: DEV (Device component use); USES (Uses)  
         (Syloid 435; lithog. printing plate contg. **photopolymerizable**  
         monomer/prepolymer and **photothermal** conversion agent)

IT **Lithographic** plates  
     (presensitized; lithog. printing plate contg.  
     **photopolymerizable** monomer/prepolymer and **photothermal**  
     conversion agent)

IT 184973-22-6, CY 10  
     RL: DEV (Device component use); USES (Uses)  
         (IR absorber; lithog. printing plate contg.  
         **photopolymerizable** monomer/prepolymer and **photothermal**  
         conversion agent)

IT 104922-10-3, GL 05  
     RL: DEV (Device component use); USES (Uses)  
         (hydrophilic binder; lithog. printing plate contg.  
         **photopolymerizable** monomer/prepolymer and **photothermal**  
         conversion agent)

IT 188653-13-6, Snowtex S  
     RL: DEV (Device component use); USES (Uses)

(hydrophilic self-film-forming agent; lithog. printing plate contg. photopolymerizable monomer/prepolymer and photothermal conversion agent)

IT 88004-52-8  
 RL: CAT (Catalyst use); USES (Uses)  
 (lithog. printing plate contg. photopolymerizable monomer/prepolymer and photothermal conversion agent)

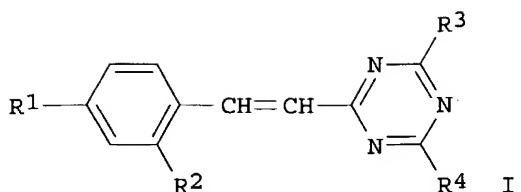
IT 9003-20-7D, Polyvinyl acetate, hydrolyzed 25852-47-5, NK Ester 23G  
 RL: DEV (Device component use); USES (Uses)  
 (lithog. printing plate contg. photopolymerizable monomer/prepolymer and photothermal conversion agent)

L48 ANSWER 48 OF 78 CA COPYRIGHT 2003 ACS  
 AN 132:129859 CA  
 TI Photopolymer for laser recording  
 AU Shimizu, Shigeki  
 CS Research Lab., Mitsubishi Chemical Corporation, Japan  
 SO Kino Zairyo (2000), 20(2), 35-43  
 CODEN: KIZAEP; ISSN: 0286-4835  
 PB Shi Emu Shi  
 DT Journal; General Review  
 LA Japanese  
 CC 74-0 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 AB A review with no ref., including deep-UV lasers for semiconductors, visible lasers for publishing, and IR lasers for com. printing such as calenders, catalogs, etc., is given.  
 ST review photopolymer laser recording printing  
 IT IR lasers  
     Photolithography  
     UV lasers  
       (photopolymer for laser recording)  
 IT Polymers, uses  
 RL: NUU (Other use, unclassified); USES (Uses)  
       (photopolymer for laser recording)  
 IT Lithographic plates  
       (presensitized; photopolymer for laser recording)

L48 ANSWER 49 OF 78 CA COPYRIGHT 2003 ACS  
 AN 131:94917 CA  
 TI Presensitized lithographic plate using surface-treated aluminum support and its manufacture  
 IN Mori, Takahiro  
 PA Konica Co., Japan  
 SO Jpn. Kokai Tokkyo Koho, 64 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM G03F007-038  
 ICS B41N001-08; G03F007-00; G03F007-004; G03F007-016; G03F007-022;  
 G03F007-023; G03F007-027; G03F007-09  
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

|      | PATENT NO.       | KIND | DATE     | APPLICATION NO. | DATE     |
|------|------------------|------|----------|-----------------|----------|
| PI   | JP 11167204      | A2   | 19990622 | JP 1997-332970  | 19971203 |
| PRAI | JP 1997-332970   |      | 19971203 |                 |          |
| OS   | MARPAT 131:94917 |      |          |                 |          |
| GI   |                  |      |          |                 |          |



**AB** The title presensitized lithog. plate comprises an Al support having small pits with av. opening diam 0.2-3.0 .mu.m which are formed densely in undulations with av. wavelength in height 3-30 .mu.m or large pits with av. opening diam. 3-30 .mu.m and roughly spherical protuberance having an av. diam. of 0.01 .mu.m to .1toreq.1/2 of the small pit av. opening diam. inside of the small pits and thereover a layer made of a **photosensitive** compn. contg. an o-naphthoquinonediazidesulfonate of a polycondensation resin of poly(hydroxyphenols) with ketones or aldehydes (no. av. mol. wt. 3.00 .times. 102-2.00 .times. 103 and wt. av. mol. wt. 5.00 .times. 102-4.00 .times. 103) and an alkali-sol. resin. The **photosensitive** compn. may contain (1) a polymer having a structural unit CR1R2CR3(CONR4AmBOH) [R1, R2 = H, alkyl, CO2H; R3 = H, halo, alkyl; R4 = H, alkyl, Ph, aralkyl; A = divalent linking group; m = 0 or 1; B = (substituted) phenylene, (substituted) naphthylene] in its mol. structure and an o-quinonediazide compd., (2) a resin prep'd. by copolycondensation of phenol and a 1-9:9- 1 molar ratio mixt. of p- and m-cresols with aldehydes and an o-quinonediazide compd., (3) an o-quinonediazide compd., a sym.-triazine compd. I [R1, R2 = (substituted) alkyl, (substituted) alkoxy, H; R3, R4 = C1-3 haloalkyl or haloalkenyl], a dye of which the color changes by interaction with the **photolysis** product of the triazine compd., and an alkali-sol. resin, (4) a compd. having .gtoreq.1 addn.-polymerizable ethylenic unsatd. double bond., an acidic vinyl copolymer sol. or swellable in aq. alkali solns. comprising a compd. having an arom. and/or aliph. OH group in its side chain as a structural unit in its mol., a **photopolymer** initiator, and a diazo resin, (5) an acid-generator, an acid-decomposable compd., and an IR absorbent, and (6) an acid-generator, an acid-insolubilizing compd., and an IR absorbent. An Al support is either mech. coarsened or electrolytically coarsened after degreasing, surface dissoln.-treated with an alkali, neutralized with an acid, electrolytically coarsened in an acidic electrolyte, addnl. surface dissoln.-treated with an alkali, neutralized with an acid, anodized to form an anodic oxide film, and coated thereon with a layer made of a metal oxide obtained by hydrolysis and polycondensation of an org. or inorg. metal compd. and then with a **photosensitive** layer made of the above compn. to give the title lithog. plate. An Al support may be surface dissoln.-treated with an alkali, neutralized with an acid, electrolytically coarsened in an acidic electrolyte based on HCl and/or AcOH, addnl. surface dissoln.-treated with an alkali, neutralized with an acid, anodized, and then coated with the above 2 layers to obtain the lithog. plate. The lithog. plate shows improved printing durability and small dot reproducibility upon printing under high speed and severe conditions such as offset rotary printing and good processability with ball-point pen and iso-PrOH-free dampening water.

**ST** presensitized lithog plate aluminum support surface; quinonediazide compd presensitized lithog plate; alkali soluble resin presensitized lithog plate; triazine presensitized lithog plate; vinyl copolymer presensitized lithog plate

**IT** Phenolic resins, uses  
RL: DEV (Device component use); USES (Uses)  
(presensitized lithog. plate using surface-treated aluminum support)

**IT** Lithographic plates  
(presensitized; presensitized lithog. plate using surface-treated aluminum support)

IT Silicates, uses  
 RL: DEV (Device component use); USES (Uses)  
 (undercoat layer; presensitized lithog. plate using surface-treated aluminum support)

IT 3524-68-3 9003-35-4, Formaldehyde-phenol copolymer 9016-83-5,  
 Cresol-formaldehyde copolymer 15625-89-5, Trimethylolpropane triacrylate  
 23295-00-3 35464-74-5, m-Cresol-p-cresol-formaldehyde-phenol copolymer  
 72063-23-1, Acrylonitrile-N-(4-hydroxyphenyl)methacrylamide-methacrylic acid-methyl methacrylate copolymer 74094-65-8, .alpha.-Naphthyl 1,2-naphthoquinone-2-diazido-5-sulfonate 220937-57-5  
 RL: DEV (Device component use); USES (Uses)  
 (presensitized lithog. plate using surface-treated aluminum support)

IT 2390-60-5, Victoria Pure Blue BOH 229326-43-6 229326-44-7  
 229326-45-8  
 RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)  
 (presensitized lithog. plate using surface-treated aluminum support)

IT 7646-85-7DP, Zinc chloride, reaction products with diazo resin and ammonium hexafluorophosphate 16941-11-0DP, Ammonium hexafluorophosphate, reaction products with zinc chloride and diazo resin 125766-04-3DP, reaction products with zinc chloride and ammonium hexafluorophosphate 125785-09-3DP, Formaldehyde-p-diazodiphenylammonium sulfate-p-hydroxybenzoic acid copolymer, reaction products with zinc chloride and ammonium hexafluorophosphate  
 RL: DEV (Device component use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)  
 (presensitized lithog. plate using surface-treated aluminum support)

IT 37321-70-3, AA 1050  
 RL: DEV (Device component use); PRP (Properties); USES (Uses)  
 (presensitized lithog. plate using surface-treated aluminum support)

IT 11099-06-2D, Ethyl silicate, hydrolyzed  
 RL: DEV (Device component use); USES (Uses)  
 (undercoat layer; presensitized lithog. plate using surface-treated aluminum support)

L48 ANSWER 50 OF 78 CA COPYRIGHT 2003 ACS  
 AN 130:146253 CA  
 TI Penetration development presensitized lithographic plate and its platemaking  
 IN Urano, Toshiyoshi; Hino, Etsuko; Tsuji, Shigeo  
 PA Mitsubishi Chemical Industries Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 29 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM B41C001-10  
 ICS B41N001-10; G03F007-00; G03F007-027; G03F007-028  
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

|      | PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE     |
|------|--|------|----------|-----------------|----------|
| PI   | JP 11010827  | A2   | 19990119 | JP 1997-170117  | 19970626 |
| PRAI | JP 1997-170117   |      | 19970626 |                 |          |
| AB   | In the title presensitized lithog. plate comprising a hydrophilicized support coated with an oleophilic photosensitive layer contg. a compd. having .gtoreq.1 addn-polymerizable ethylenic double bond and a photopolymer. initiators, the peeling strength of gum tape from the support is .ltoreq.500 g/cm. In the title platemaking method in which the lithog. plate is imagewise exposed to light ranging from UV to near IR to imagewise cure the photosensitive layer followed by removing the unexposed area of the layer, a penetrant that penetrates into the unexposed layer to decrease the adhesivity between the layer and support is penetrated into the layer after imagewise exposure and phys. stimulation is applied to the layer to remove the unexposed area of which |      |          |                 |          |

the adhesivity to the support is decreased from the support. In the above method, a cover sheet may be laminated on the **photosensitive** layer prior to or after imagewise exposure of the plate and peeled after imagewise exposure to transfer the unexposed area thereto by utilizing the adhesivity of the sheet to remove the unexposed area from the support. The lithog. plate capable of forming a **photo-cured** image without processing with alk. developing soln. shows improved printing durability, **photosensitivity**, and image reproducibility.

ST penetration development presensitized lithog plate; ethylenic unsatd compd presensitized lithog plate

IT **Lithographic plates**  
(presensitized; presensitized lithog. plate contg. ethylenic unsatd. compd. for penetration development)

IT 32435-46-4  
RL: TEM (Technical or engineered material use); USES (Uses)  
(Kayamer PM 2; presensitized lithog. plate contg. ethylenic unsatd. compd. for penetration development)

IT 90216-38-9P, Allyl methacrylate-methacrylic acid copolymer 220122-96-3P;  
3-Allyloxy-2-hydroxypropyl methacrylate-methacrylic acid copolymer  
220122-98-5P  
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(binder; presensitized lithog. plate contg. ethylenic unsatd. compd. for penetration development)

IT 167208-84-6, Isobutyl acrylate-isobutyl methacrylate-methacrylic acid-methyl methacrylate copolymer  
RL: TEM (Technical or engineered material use); USES (Uses)  
(binder; presensitized lithog. plate contg. ethylenic unsatd. compd. for penetration development)

IT 87068-17-5, Pelex NBL  
RL: TEM (Technical or engineered material use); USES (Uses)  
(penetrant; presensitized lithog. plate contg. ethylenic unsatd. compd. for penetration development)

IT 25736-86-1 56361-55-8 95971-16-7, UA 306H  
RL: TEM (Technical or engineered material use); USES (Uses)  
(presensitized lithog. plate contg. ethylenic unsatd. compd. for penetration development)

L48 ANSWER 51 OF 78 CA COPYRIGHT 2003 ACS  
AN 129:237594 CA  
TI FTIR spectroscopy studies of **photochemical** and thermal processes on offset **lithographic** printing plates  
AU Torres-Filho, Afranio; Erdeski, Mark L.  
CS Anitec Printing Plates, Holyoke, MA, USA  
SO IS&T's Annual Conference (1997), 50th, 511-517  
CODEN: ISACFN  
PB Society for Imaging Science and Technology  
DT Journal  
LA English  
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 73  
AB Fourier Transform IR (FTIR) spectroscopy was used to study **photochem.** and thermal processes that take place during and after irradn., and post-treatment, of lithog. printing plates. This technique was used both in Transmission as well as in Specular Reflectance mode. The processes studied included: (a) Monitoring free radical **photopolymn.** of acrylate oligomers and monomers; (b) Post-cure of the plates by baking at temps. between 200.degree.F (149.degree.C) and 500.degree.F (260.degree.C); (c) Following the **photodecompn.** of diazo mols. on com. plate substrates. It has been possible to det. the induction period before polymn. when radical scavengers are present in the formulation. The implication of the results on the microstructure of the network is also discussed. Attempts were made to correlate some of these observations, such as the d.p. (D.P.) and the mol. structure and phys.

properties of the monomer-oligomers used, with the performance of the plates, in particular with the resln. and the length of run on a com. printing press.

ST FTIR spectroscopy offset lithog printing plate; **photochem** thermal process printing plate spectroscopy

IT **Lithographic plates**  
Microstructure  
Physical properties  
Radical scavengers  
(FTIR spectroscopy study of **photochem**. and thermal process on offset lithog. printing plate)

IT Acrylic polymers, properties  
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(FTIR spectroscopy study of **photochem**. and thermal process on offset lithog. printing plate)

IT **IR** spectroscopy  
(near-**IR**, Fourier-transform; FTIR spectroscopy study of **photochem**. and thermal process on offset lithog. printing plate)

IT Polymerization  
(**photopolymn.**, free radical; FTIR spectroscopy study of **photochem**. and thermal process on offset lithog. printing plate)

RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Collins, G; J Coat Technol 1979, V51, P57 CA
- (2) Decker, C; Eur Polym J 1984, V20, P753 CA
- (3) Diamond, A; Handbook of Imaging Materials 1991, P61
- (4) Dietz, J; Macromolecules 1995, V28, P5163 CA
- (5) Gogoli, J; Photo-Offset Fundamentals, 4th ed 1980
- (6) Kishore, K; J Polym Sci Polym Chem 1988, V26, P2832
- (7) Koenig, T; "Cage Effects", Chap 4 in "Free Radicals" 1973, VI
- (8) Kondo, S; US 4367280 1983 CA
- (9) Kosar, J; Photosensitive Systems 1965
- (10) Minsk, L; US 2690966 1948 CA
- (11) Reiser, A; Photoreactive Polymers 1989, P102
- (12) Shinozaki, F; US 4386153 1983 CA
- (13) Sypek, M; US 5543262 1996 CA
- (14) Torres-Filho, A; Unpublished
- (15) Wilson, C; Introduction to Microlithography L F Thompson, ACS Symp Ser 1983, V219, P89

L48 ANSWER 52 OF 78 CA COPYRIGHT 2003 ACS

AN 129:168007 CA

TI Study of binder resins used in pre-sensitized **lithographic** printing plate

AU Xu, Jinqi; Feng, Shujing; Li, Lidong; Gao, Fang; Yang, Yongyuan

CS Institute of Photographic Chemistry, Chinese Academy of Sciences, Beijing, 100101, Peop. Rep. China

SO Journal of Photopolymer Science and Technology (1998), 11(1), 105-108  
CODEN: JSTEEW; ISSN: 0914-9244

PB Technical Association of Photopolymers, Japan

DT Journal

LA English

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

AB Through esterifying reaction of poly(styrene-maleic anhydride) resin with hydroxyethyl acrylate, acrylic group and free carboxylic acid are introduced into the side chain of resins. The developing speed in alk. soln. and **photosensitive** properties are improved. Through comparing 5 kinds of resins, a good result was obtained. The **photosensitivity**, resln. and half-tone dot repetition of printing plate used A-3 resin have 6.05 mJ/cm<sup>2</sup>, 4 .mu.m and 2% resp.

ST binder resin presensitized lithog printing plate; styrene maleic anhydride

IT resin hydroxyethyl acrylate  
Binders  
Esterification  
IR spectra  
Lithography  
Photoimaging materials  
Printing plates  
Ring opening  
(binder resins used in pre-sensitized lithog. printing plate)  
IT Polymerization  
(photopolymn.; binder resins used in pre-sensitized lithog.  
printing plate)  
IT 51204-92-3  
RL: NUU (Other use, unclassified); USES (Uses)  
(binder resins used in pre-sensitized lithog. printing plate)  
RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD  
RE

(1) Komano, H; GB 2273101 1994 CA  
(2) Konica Inc; JP 59450 1994  
(3) Mitsui Toatsu Chemicals Inc; JP 106548 1992  
(4) Toshoshi, U; JP 295061 1994

L48 ANSWER 53 OF 78 CA COPYRIGHT 2003 ACS  
AN 129:115641 CA  
TI Photothermographic material for lithographic plate  
preparation  
IN Habenhauer, Helmuth; Eichhorn, Mathias  
PA Agfa-Gevaert N.V., Belg.  
SO Eur. Pat. Appl., 9 pp.  
CODEN: EPXXDW  
DT Patent  
LA English  
IC ICM G03F007-00  
ICS G03F001-00; G03F007-09; B41M005-36; B41C001-10  
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)

FAN.CNT 1

|    | PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE     |
|----|--|------|----------|-----------------|----------|
| PI | EP 851296  | A1   | 19980701 | EP 1997-203689  | 19971125 |
|    | EP 851296  | B1   | 20020626 |                 |          |
|    | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,<br>IE, SI, LT, LV, FI, RO |      |          |                 |          |
|    | JP 10193825  | A2   | 19980728 | JP 1997-364761  | 19971222 |
|    | US 5912105   | A    | 19990615 | US 1997-997390  | 19971223 |

PRAI EP 1996-203673 A 19961223  
AB A photothermog. material for lithog. plate prepns. comprises a  
substrate and two layers (a) and (b) built up thereon in the stated  
sequence (a) a photopolymer layer which is sensitive to  
radiation in the near UV and in the visible range but not very sensitive  
to radiation in the IR range and (b) a layer which is  
transparent to radiation in the near UV and in the visible range, only  
slightly permeable to oxygen and more permeable to oxygen under the  
influence of radiation in the IR range than before exposure.

ST photothermog material IR lithog plate; oxygen  
permeating compn IR lithog plate

IT Carbon black, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(Derussol P 130; photothermog. materials with IR  
-sensitive oxygen-permeating and photopolymer layers for  
lithog. plate manuf. contg.)

IT Polyurethanes, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(acrylates; photothermog. materials with IR  
-sensitive oxygen-permeating and photopolymer layers for

lithog. plate manuf. contg.)  
 IT Dyes  
 (blue, Flexo Blue; photothermog. materials with IR  
 -sensitive oxygen-permeating and photopolymer layers for  
 lithog. plate manuf. contg.)  
 IT Photothermographic copying  
 (materials; with IR-sensitive oxygen-permeating and  
 UV-sensitive photopolymer layers for manuf. of lithog.  
 plates)  
 IT Lithographic plates  
 (photothermog. materials with IR-sensitive  
 oxygen-permeating and UV-sensitive photopolymer layers for  
 manuf. of)  
 IT Polyurethanes, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (photothermog. materials with IR-sensitive  
 oxygen-permeating and photopolymer layers for lithog. plate  
 manuf. contg.)  
 IT Photoimaging materials  
 (with IR-sensitive oxygen-permeating and UV-sensitive  
 photopolymer layers for manuf. of lithog. plates)  
 IT 602-56-2, 9-Phenylacridine 603-48-5, Leuco crystal violet 9002-89-5,  
 Poly(vinyl alcohol) 9004-70-0, Nitrocellulose 25086-15-1, Methacrylic  
 acid-methyl methacrylate copolymer 28630-43-5, Glycidyl  
 methacrylate-methacrylic acid-methyl methacrylate copolymer 73539-65-8  
 97802-84-1, 2,4-Bis(trichloromethyl)-6-(4-styrylphenyl)-s-triazine  
 125051-32-3 138636-06-3, Ebecryl 1290 209806-90-6  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (photothermog. materials with IR-sensitive  
 oxygen-permeating and photopolymer layers for lithog. plate  
 manuf. contg.)

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Agfa Gevaert Nv; EP 0573092 A 1993 CA
- (2) Anon; PATENT ABSTRACTS OF JAPAN 1991, V015(053), PM-1079
- (3) Matsushita Electric Ind Co Ltd; JP 02286335 A 1990 CA
- (4) Nippon Paint Co Ltd; EP 0509514 A 1992 CA
- (5) Vickers Plc; EP 0275147 A 1988 CA

L48 ANSWER 54 OF 78 CA COPYRIGHT 2003 ACS

AN 129:34443 CA

TI Photopolymerizable composition containing addition-polymerizable  
compound, radical-producing agent, and squarylium compound

IN Yamaoka, Tsuguo; Koseki, Kenichi; Obara, Mitsuhiro; Shimizu, Ikuro; Ito,  
Yukiyoshi; Kawato, Hitoshi

PA Kyowa Hakko Co., Ltd., Japan

SO U.S., 11 pp., Cont. of U.S. Ser. No. 204,363, abandoned.

CODEN: USXXAM

DT Patent

LA English

IC ICM G03C001-73

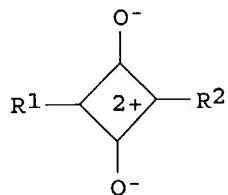
NCL 430281100

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reproductive Processes)

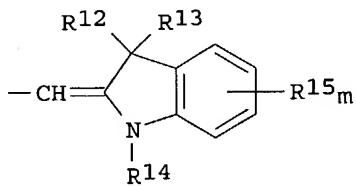
FAN.CNT 3

|      | PATENT NO.            | KIND | DATE     | APPLICATION NO. | DATE     |
|------|-----------------------|------|----------|-----------------|----------|
| PI   | US 5756258            | A    | 19980526 | US 1995-386468  | 19950210 |
|      | EP 1113335            | A1   | 20010704 | EP 2001-106388  | 19930707 |
|      | R: CH, DE, FR, GB, LI |      |          |                 |          |
|      | US 5527659            | A    | 19960618 | US 1994-331147  | 19941028 |
|      | US 6007965            | A    | 19991228 | US 1997-946353  | 19971007 |
| PRAI | JP 1992-185224        | A    | 19920713 |                 |          |
|      | US 1993-52999         | B1   | 19930427 |                 |          |
|      | US 1994-204363        | B1   | 19940311 |                 |          |

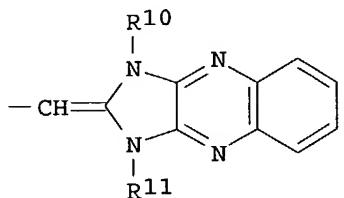
US 1994-331147 A2 19941028  
 JP 1992-113604 A 19920506  
 EP 1993-914964 A3 19930707  
 US 1995-386468 A1 19950210  
 OS MARPAT 129:34443  
 GI



I



II



III

**AB** The present invention relates to a **photopolymerizable compn.** comprising an addn.-polymerizable compd. which has at least one ethylenically unsatd. double bond, a radical-producing agent, and a squarylium compd. represented by the formula I (R1 = II where R12, R13 = alkyl or R12 and R13 together with the carbon atom to which they are bonded may form a hydrocarbon ring which may be substituted with .gtoreq.1 halogen atom, an alkyl group, or an alkoxy group; R14 = H, alkyl, aryl, or aralkyl; R15 = halogen, alkyl, aryl, alkoxy, or aralkyl; m = an integer of 0-4 provided that when m = 2-4, two adjacent R15 groups together may form an arom. ring which may be substituted with .gtoreq.1 halogen atom, an alkyl group, or an alkoxy group; R2 = III where R10, R11 = H, alkyl, aryl, or aralkyl). The compn. is highly sensitive to visible and near IR lights, particularly He-Ne laser, LED, diode laser, etc. having oscillation wavelengths in .gtoreq.600 nm, and thus is useful as a material for holograms, presensitized plates for laser direct process, dry film resists, digital proofs, and **photosensitive microcapsules**.

**ST** photopolymerizable compn squarylium compd lithog plate;  
photoresist photopolymerizable compn squarylium compd;  
holog photopolymerizable compn squarylium compd

**IT** Photoresists  
(photopolymerizable compns. contg. addn.-polymerizable compds., radical-producing agents, and squarylium compds. as)

**IT** Holography  
(photopolymerizable compns. contg. addn.-polymerizable compds., radical-producing agents, and squarylium compds. for)

**IT** Lithographic plates  
(photopolymerizable compns. contg. addn.-polymerizable compds., radical-producing agents, and squarylium compds. for prepn. of)

**IT** Photoimaging materials  
(photopolymerizable; contg. addn.-polymerizable compds., radical-producing agents, and squarylium compds.)

**IT** 135596-19-9 156057-17-9 159094-57-2

RL: TEM (Technical or engineered material use); USES (Uses)  
     (**photopolymerizable** compns. for holog. and  
     **photolithog.** contg.)  
 IT 79-41-4D, Methacrylic acid, esters, polymers 3524-68-3, Pentaerythritol  
     triacrylate 6542-67-2, 2,4,6-Tris(trichloromethyl)triazine  
     RL: TEM (Technical or engineered material use); USES (Uses)  
     (**photopolymerizable** compns. for holog. and  
     **photolithog.** contg. squarylium compds. and)  
 IT 156057-15-7P 156057-31-7P 156099-24-0P 156764-74-8P  
     RL: SPN (Synthetic preparation); TEM (Technical or engineered material  
     use); PREP (Preparation); USES (Uses)  
     (prepn. and use in prep. **photopolymerizable** compns. for  
     holog. and **photolithog.**)  
 IT 91-22-5, Quinoline, reactions 118-12-7, 1,3,3-Trimethyl-2-  
     methyleneindoline 605-59-4, N-Ethyllepidinium iodide 2892-63-9  
     7478-69-5, 1,1-Bis(p-dimethylaminophenyl)ethylene 61699-62-5,  
     3,4-Diisopropoxy-3-cyclobutene-1,2-dione 155950-65-5,  
     1,3-Dihexyl-2-methyimidazo[4,5-b]iquinoxalinium tosylate 155950-67-7,  
     1,3-Dibutyl-2-methyimidazo[4,5-b]iquinoxalinium tosylate  
     RL: RCT (Reactant); TEM (Technical or engineered material use); RACT  
     (Reactant or reagent); USES (Uses)  
     (reaction in prep. squarylium compds. for **photopolymerizable**  
     compns. for holog. and **photolithog.**)

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Anon; EP 0379200 1990 CA
- (2) Anon; JP 2306247 1990
- (3) Anon; EP 0408014 1991 CA
- (4) Santoh; US 5190849 1993
- (5) Satoh; US 5256794 1993 CA
- (6) Yamaoka; US 5527659 1996 CA

L48 ANSWER 55 OF 78 CA COPYRIGHT 2003 ACS

AN 128:134403 CA

TI **Photosensitive** composition and element containing polyazide and  
     infrared absorber in **photocrosslinkable** binder

IN West, Paul Richard; Gurney, Jeffery Allen

PA Eastman Kodak Co., USA

SO U.S., 7 pp.

CODEN: USXXAM

DT Patent

LA English

IC ICM G03F007-012

NCL 430167000

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other  
     Reprographic Processes)

FAN.CNT 1

|    | PATENT NO.  | KIND | DATE     | APPLICATION NO.  | DATE     |
|----|-------------|------|----------|------------------|----------|
| PI | US 5705309  | A    | 19980106 | US 1996-719100   | 19960924 |
|    | DE 19738134 | A1   | 19980326 | DE 1997-19738134 | 19970901 |
|    | JP 10115914 | A2   | 19980506 | JP 1997-258736   | 19970924 |

PRAI US 1996-719100 19960924

AB An **IR** imaging compn. comprises a **photocrosslinkable**  
     polymeric binder having pendant **photopolymerizable** olefinic  
     double bonds, a polyazide **photoinitiator**, and an **IR**  
     -absorbing compd. The imaging compn. is useful in prepn. of a  
     presensitized lithog. printing plate that can be used to provide an image  
     using a laser, followed by development.

ST **IR** laser **photoimaging** compn lithog plate; polyazide  
     **IR** **photoimaging** compn lithog plate;  
     **photopolymerizable** binder **IR** laser **photoimaging**  
     compn

IT **Lithographic** plates  
     (**IR** imaging compns. contg. polyazides, **IR**

IT absorbers, and **photocrosslinkable** binders for manuf. of)  
Polyamic acids  
RL: TEM (Technical or engineered material use); USES (Uses)  
(**IR** imaging compns. for lithog. plate manuf. contg.  
polyazides and)

IT Carbon black, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(**IR** imaging compns. for lithog. plate manuf. contg.  
polyazides, **photocrosslinkable** binders and)

IT **Photoimaging** materials  
(**IR**; contg. polyazides, **IR** absorbers, and  
**photocrosslinkable** binders for lithog. plate prepns.)

IT Polyethers, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(di-Me siloxane-, BYK 307; **IR** imaging compns. for lithog.  
plate manuf. contg. polyazides and)

IT Polysiloxanes, uses  
Polysiloxanes, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(di-Me, polyether-, BYK 307; **IR** imaging compns. for lithog.  
plate manuf. contg. polyazides and)

IT 5284-79-7, 2,6-Bis(p-azidobenzal)-4-methylcyclohexanone  
RL: TEM (Technical or engineered material use); USES (Uses)  
(**IR** imaging compns. for lithog. plate manuf. contg.  
**photopolymerizable** binders and)

IT 31942-21-9D, Benzophenonetetracarboxylic dianhydride-oxydianiline-m-phenylenediamine copolymer, esterified with hydroxyethyl methacrylate  
RL: TEM (Technical or engineered material use); USES (Uses)  
(**IR** imaging compns. for lithog. plate manuf. contg.  
polyazides and)

IT 2718-90-3 2915-44-8 5284-80-0 10193-62-1, 4,4'-Diazidostilbene  
14128-15-5 17303-16-1, 4,4'-Diazidobenzophenone 20237-98-3  
48180-65-0 72695-23-9  
RL: TEM (Technical or engineered material use); USES (Uses)  
(**IR** imaging compns. for lithog. plate manuf. contg.  
polymerizable binders, **IR** absorbers and)

IT 147-14-8, Irgalite Blue GLVO  
RL: TEM (Technical or engineered material use); USES (Uses)  
(Irgalite Blue GLVO; **IR** imaging compns. for lithog. plate  
manuf. contg. polyazides and)

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD  
RE

(1) Anon; EP 562952 1993  
(2) Anon; EP 654711 1995 CA  
(3) Bills; US 5278023 1994 CA  
(4) Etherington; US 5254431 1993 CA  
(5) Kotachi; US 5326670 1994 CA  
(6) Kozu; US 3840390 1974 CA  
(7) Pawlowski; US 4940646 1990 CA  
(8) Potts; US 5238777 1993 CA  
(9) Rauner; US 4139390 1979 CA  
(10) West; US 4622284 1986 CA

L48 ANSWER 56 OF 78 CA COPYRIGHT 2003 ACS

AN 127:101775 CA

TI **Photoradical generating agent, photopolymerizable**  
composition, and process of presensitized lithographic printing  
plate

IN Nakayama, Noritaka

PA Konica Co., Japan

SO Jpn. Kokai Tokkyo Koho, 24 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

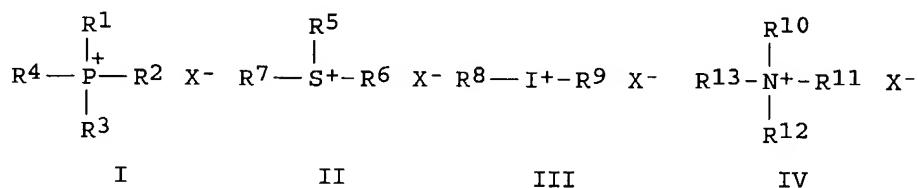
IC ICM G03F007-029

CC ICS C07F009-54; C08F002-50; G03F007-031; C07C381-12  
 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)  
 Section cross-reference(s): 35, 38

FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 09134009    | A2   | 19970520 | JP 1995-291286  | 19951109 |
| PRAI | JP 1995-291286 |      | 19951109 |                 |          |

GI



AB In the photoradical generating agent contg. an onium salt represented by I, II, III, and IV ( $R^{1-4}$ ,  $R^{10-12}$  = alkyl, aryl, aralkyl;  $R^{5-7}$  = alkyl, aryl;  $R^{8,9}$  = aryl;  $X^-$  = counter ion), a radical generating agent, and carbon black, the onium salt and/or the radical generating agent is adsorbed on carbon black. The counter ion may be a halogen ion. The radical generating agent may be a bisimidazole deriv. The compn. is used for a photosensitive layer of a presensitized lithog.

printing plate, in which the photosensitive layer contains a compd. having  $\geq 1$  ethylenic unsatd. bond, a binder, and the photoradical generating agent. The presensitized lithog. printing plate is exposed by a laser beam, and then unexposed areas of the protective layer and the photosensitive layer are eluted. A high concn. of the photoradical was generated by irradiating IR light.

ST photoradical generator presensitized lithog printing plate  
 IT Lithographic plates

(photopolymerizable compn. in presensitized lithog. printing plate)

IT Carbon black, uses

RL: NUU (Other use, unclassified); USES (Uses)

(photopolymerizable compn. in presensitized lithog. printing plate)

IT 869-51-2, Tris(2-hydroxyethyl)sulfonium chloride 1643-19-2, Tetrabutylammonium bromide 3115-68-2, Tetrabutylphosphonium bromide 3462-97-3, 4-Methoxybenzyltriphenylphosphonium chloride 4189-82-6 5197-95-5, Benzyltriethylammonium bromide 5667-47-0 14937-42-9, Tetra(decyl)ammonium bromide 25316-59-0, Benzyltributylammonium bromide 58377-39-2

RL: MOA (Modifier or additive use); USES (Uses)

(photopolymerizable compn. in presensitized lithog. printing plate)

IT 2256-48-6 12157-31-2 108961-97-3 109347-70-8 110930-60-4  
 173474-43-6

RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(photopolymerizable compn. in presensitized lithog. printing plate)

IT 90-94-8 1707-68-2 82799-44-8 189515-41-1

RL: MOA (Modifier or additive use); USES (Uses)

(photoradical generating agent in compn. in presensitized lithog. printing plate)

AN 126:270395 CA  
 TI Process for producing **lithographic** printing plate,  
**photosensitive** plate and aqueous ink composition therefor  
 IN Hase, Takakazu; Arimatsu, Seiji; Kimoto, Koichi  
 PA Nippon Paint Co., Ltd., Japan  
 SO U.S., 8 pp., Cont.-in-part of U.S.Ser.No.870,423, abandoned.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 IC ICM G03F007-30  
 NCL 430302000  
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 FAN.CNT 2

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | US 5609993     | A    | 19970311 | US 1994-318559  | 19941005 |
|      | JP 04317065    | A2   | 19921109 | JP 1991-85176   | 19910417 |
| PRAI | JP 1991-85176  |      | 19910417 |                 |          |
|      | US 1992-870423 |      | 19920417 |                 |          |

AB The present invention provides an improvement of a direct lithog. printing plate-making process using ink-jet printing to provide a lithog. printing plate having excellent resoln. Accordingly, the present invention provides an improvement of a process for producing a lithog. printing plate comprising selectively forming a light-transmittable oxygen barrier film on a **photopolymerizable** layer of a **photosensitive** plate, exposing to light and then removing uncured portion on which the oxygen barrier film is not covered, wherein a protective layer which is capable of transmitting oxygen gas and the light to cure the **photopolymerizable** layer is formed on the **photopolymerizable** layer, a **photosensitive** plate therefor, and an aq. ink compn. therefor.

ST lithog plate prepн ink jet printing  
 IT Polyoxyalkylenes, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (PEO 1; direct lithog. plate prepн. by **photopolymn.** and  
 ink-jet printing using **photosensitive** plates with protective layers of)

IT Ink-jet printing  
 (in prepн. of lithog. plates)  
 IT Polyurethanes, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (oligomers, Viscoat; in prepн. of lithog. plates)

IT Lithographic plates  
 (prepн. using **photopolymn.** and ink-jet printing)  
 IT 9003-39-8, Poly(vinylpyrrolidone)  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (K 30; direct lithog. plate prepн. by **photopolymn.** and  
 ink-jet printing using **photosensitive** plates with protective layers of)

IT 25322-68-3  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (PEO 1; direct lithog. plate prepн. by **photopolymn.** and  
 ink-jet printing using **photosensitive** plates with protective layers of)

IT 128-37-0, 2,6-Di-tert-butyl-4-methylphenol, uses 3524-68-3 25930-98-7,  
 Neocryl B 723 58206-31-8, Scriptset 540 71868-10-5, IR 907  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (direct lithog. plate prepн. by ink-jet printing and  
**photopolymn.** using **photopolymn.** compn. contg.)

IT 56-81-5, 1,2,3-Propanetriol, uses 569-64-2, Malachite green 9002-89-5,  
 Poly(vinyl alcohol) 9016-45-9, Polyethylene glycol nonylphenyl ether  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (direct lithog. plate prepн. by **photopolymn.** and ink-jet  
 printing using ink compn. contg.)

IT 9004-62-0, Hydroxyethylcellulose 9004-64-2, Hydroxypropylcellulose  
 9004-65-3, Hydroxypropylmethylcellulose  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (direct lithog. plate prep. by **photopolymer** and ink-jet  
 printing using **photosensitive** plates with protective layers  
 of)

L48 ANSWER 58 OF 78 CA COPYRIGHT 2003 ACS  
 AN 126:244890 CA  
 TI **Photopolymerizing** composition, image-forming material, radical  
 generation, **photosensitive** material for preparing  
**lithographic** plate, and preparation of **lithographic**  
 plate  
 IN Nakayama, Noritaka  
 PA Konishihiroku Photo Ind, Japan  
 SO Jpn. Kokai Tokkyo Koho, 21 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM G03F007-029  
 ICS B41C001-00; G03F007-00; G03F007-004; G03F007-027; G03F007-031;  
 G03F007-20  
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)  
 FAN.CNT 1

|      | PATENT NO.        | KIND | DATE     | APPLICATION NO. | DATE     |
|------|-------------------|------|----------|-----------------|----------|
| PI   | JP 09034110       | A2   | 19970207 | JP 1995-180086  | 19950717 |
| PRAI | JP 1995-180086    |      | 19950717 |                 |          |
| OS   | MARPAT 126:244890 |      |          |                 |          |

AB The title compn. contains a polymg. compd., .gtoreq.1 onium salt selected  
 from R1P+R2R3R4 X-, R5S+R6R7 X-, R8I+R9 X-, and R10N+R11R12R13 X- (R1-4,  
 R10-13 = alkyl, aryl, aralkyl, R1-4 or R10-13 may form a ring; R5-7 =  
 alkyl, aryl, R5-7 may form a ring; R8, R9 = aryl; X- = counter anion), a  
 light-heat-converting element, and a radical-generating agent. The  
 image-forming material comprises the compn. contg. the onium salt in which  
 the counter anion is Cl- or Br-. Radicals are generated by irradn. of the  
 compn. using IR rays. The **photosensitive** material  
 comprises a hydrophilic support with coatings of a **photosensitive**  
 layer contg. a compd. having .gtoreq.1 ethylenic unsatd. bond, a binder,  
 .gtoreq.1 of the above onium salts, a light-heat-converting element, and a  
 radical-generating agent and a protective layer. The material is  
 imagewise exposed under semiconductor laser scanning followed by removing  
 the protective layer and the unexposed areas of the **photosensitive**  
 layer to give a lithog. printing plate. The compn. provides high  
 sensitive and high resoln. images using IR rays and shows good  
 storage stability.

ST **photopolymerizable** compn onium salt; sulfonium salt  
**photopolymerizable** compn; ammonium salt **photopolymerizable**  
 compn; light heat conversion agent; radical initiator  
**photopolymerizable** compn; **photosensitive** lithog plate  
 onium salt; semiconductor laser scanning lithog plate; IR ray  
 radical generator

IT Phosphonium compounds  
 Quaternary ammonium compounds, uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (**photosensitive** lithog. plate prep. from compn. contg. onium  
 compd. by semiconductor laser scanning)

IT **Lithographic** plates  
 (**photosensitive**; **photosensitive** lithog. plate  
 prep. from compn. contg. onium compd. by semiconductor laser scanning)

IT 12157-31-2 108961-97-3 109347-70-8 110930-60-4 173474-43-6  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (light-heat conversion agent; **photosensitive** lithog. plate  
 prep. from compn. contg. onium compd. by semiconductor laser scanning)

IT 56-37-1, Benzyltriethylammonium chloride 869-51-2 1643-19-2,  
 Tetrabutylammonium bromide 3115-68-2, Tetrabutylphosphonium bromide  
 3462-97-3 4189-82-6, Diphenyl(p-methylphenyl)sulfonium bromide  
 5667-47-0 14866-34-3, Tetradodecylammonium bromide 25316-59-0,  
 Benzyltributylammonium bromide 58377-39-2, Bis(P-tert-  
 butylphenyl)iodonium bromide  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (photosensitive lithog. plate prep. from compn. contg. onium  
 compd. by semiconductor laser scanning)

IT 1707-68-2 29777-36-4 71002-23-8 188348-58-5  
 RL: CAT (Catalyst use); USES (Uses)  
 (radical initiator; photosensitive lithog. plate prep. from  
 compn. contg. onium compd. by semiconductor laser scanning)

L48 ANSWER 59 OF 78 CA COPYRIGHT 2003 ACS

AN 125:342868 CA

TI Photopolymerization image-forming method using laser beam

IN Urano, Toshoshi; Yamaoka, Tsugio; Nagasaka, Hideki

PA Mitsubishi Chem Corp, Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03F007-029

ICS G03F007-028

CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 37, 76

FAN.CNT 1

|      | PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|------|---------------|------|----------|-----------------|----------|
| PI   | JP 08220759   | A2   | 19960830 | JP 1995-28413   | 19950216 |
| PRAI | JP 1995-28413 |      |          |                 |          |

AB The photopolymerizable compn., comprising (1) .gtoreq.1 radical-generator selected from org. peroxides, onium salts, hexaarylbimidazoles, titanocene compds., heterocycles contg. .gtoreq.1 of S, O, and N contg. polyhalomethyl group, and polyhalomethylsulfone compds., (2) a compd. having .gtoreq.2 ethylenic unsatd. bonds, and (3) a sensitizing dye, are simultaneously irradiated with a light for excitation from the ground state and a light for excitation from the triplet state of the sensitizer to form images. Clear images can be obtained by low power laser or IR laser irradn. The material is useful for manuf. of lithog. plates and elec. circuits.

ST image forming material sensitizing dye; radical generator presensitized lithog plate

IT Lithographic plates

(presensitized, photopolymerizable compd. contg. radial generator, unsatd. compd. and sensitizing dye)

IT Resists

(radiation-sensitive, photopolymerizable compd. contg. radial generator, unsatd. compd. and sensitizing dye)

IT 1707-68-2 6542-67-2 58109-40-3 77473-08-6 125051-32-3

RL: CAT (Catalyst use); USES (Uses)

(photopolymerizable compd. contg. radial generator, unsatd. compd., and sensitizing dye)

IT 15625-89-5, Trimethylolpropane triacrylate 26936-24-3, Methyl acrylate-methacrylic acid-methyl methacrylate copolymer

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(photopolymerizable compd. contg. radial generator, unsatd. compd., and sensitizing dye)

IT 63226-13-1 83179-50-4 162461-65-6

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)

(sensitizing dye; photopolymerizable compd. contg. radial

generator , unsatd. compd., and sensitizing dye)

L48 ANSWER 60 OF 78 CA COPYRIGHT 2003 ACS  
AN 125:261311 CA  
TI Water-developable **photosensitive** composition and  
**lithographic** printing plate  
IN Hatsutori, Ryoji; Kojima, Yasuo; Sasa, Nobumasa  
PA Konishiroku Photo Ind, Japan  
SO Jpn. Kokai Tokkyo Koho, 24 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM G03F007-004  
ICS G03F007-00; G03F007-029; G03F007-033; G03F007-32  
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)  
FAN.CNT 1

| PATENT NO.        | KIND | DATE     | APPLICATION NO. | DATE     |
|-------------------|------|----------|-----------------|----------|
| PI JP 08190192    | A2   | 19960723 | JP 1995-2630    | 19950111 |
| PRAI JP 1995-2630 |      | 19950111 |                 |          |

AB The compn. contains a polymerizable compd., a **photopolymer**.  
initiator, an org. solvent-dispersible latex, and a phenol OH-, NH<sub>2</sub>-,  
and/or CO-contg. compd. Alternatively the compn. contains a polymerizable  
compd., a near IR-absorbing cationic dye borate complex, and an  
org. solvent-dispersible latex. The lithog. plate using the compn. is  
also claimed. The compn. has improved storage stability.  
ST **photosensitive** lithog plate water developable  
IT **Lithographic** plates  
(water-developable **photosensitive** compns. with storage  
stability for lithog. printing plates)  
IT 85-60-9, 4,4'-Butylidenebis(3-methyl-6-tert-butylphenol) 91-53-2  
1843-05-6, 2-Hydroxy-4-octoxybenzophenone  
RL: MOA (Modifier or additive use); USES (Uses)  
(antioxidants; water-developable **photosensitive** compns. with  
storage stability for lithog. printing plates)  
IT 63226-13-1 141714-54-7 157186-53-3  
RL: CAT (Catalyst use); USES (Uses)  
(**photopolymer**. initiator; water-developable  
**photosensitive** compns. with storage stability for lithog.  
printing plates)  
IT 3524-68-3, Pentaerythritol triacrylate 181815-80-5  
RL: TEM (Technical or engineered material use); USES (Uses)  
(water-developable **photosensitive** compns. with storage  
stability for lithog. printing plates)

L48 ANSWER 61 OF 78 CA COPYRIGHT 2003 ACS  
AN 125:127860 CA  
TI **Photosensitive** material for **lithographic** plates and  
method for making the plates  
IN Maehashi, Tatsuichi; Matsumoto, Shinji; Kuroki, Takaaki; Kawakami, Sota  
PA Konishiroku Photo Ind, Japan  
SO Jpn. Kokai Tokkyo Koho, 20 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM G03F007-028  
ICS G03F007-00; G03F007-027; G03F007-029; G03F007-20  
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)  
FAN.CNT 1

| PATENT NO.          | KIND | DATE     | APPLICATION NO. | DATE     |
|---------------------|------|----------|-----------------|----------|
| PI JP 08114916      | A2   | 19960507 | JP 1994-247968  | 19941013 |
| PRAI JP 1994-247968 |      | 19941013 |                 |          |

AB The **photosensitive** material comprises a hydrophilic support having thereon a **photosensitive** layer contg. a compd. having .gtoreq.1 ethylenic unsatd. bond, a binder, and a **photopolymn.** initiator initiator and a protective layer and the **photopolymn.** initiator at least contains a salt of a cationic dye with an organoboron compd. anion and the other B salts at mol. ratio 1:2-5. Also claimed is a method for making lithog. plates by imagewise exposure of a **photosensitive** layer to laser followed by removal of the unexposed area of the protective layer and the **photosensitive** layer by dissoln. The cationic dye may be a near-IR-absorbing R<sub>1</sub>R<sub>2</sub>C+(CH:CR<sub>5</sub>)<sub>m</sub>(CH:CH)nCH:CR<sub>3</sub>R<sub>4</sub> X- [R<sub>1</sub>-5 = H, (un)substituted H, alkyl, cycloalkyl, aryl, aralkyl, styryl, heterocycl; m = 0, 1; n = 0-2; X- = B compd. anion]. The **photosensitive** material shows good storage stability.

ST presensitized lithog plate laser sensitive; **photosensitive** compn presensitized lithog plate; cationic dye presensitized lithog plate; polymethine dye presensitized lithog plate

IT Dyes  
Dyes, cyanine  
(near-IR-absorbing, near-IR-sensitive  
**photosensitive** compn. for lithog. plates contg. cationic dye organoboron salts and B salts as **photopolymn.** initiators)

IT Polymerization catalysts  
(photochem., near-IR-sensitive  
**photosensitive** compn. for lithog. plates contg. cationic dye organoboron salts and B salts as **photopolymn.** initiators)

IT Lithographic plates  
(presensitized, near-IR-sensitive **photosensitive** compn. for lithog. plates contg. cationic dye organoboron salts and B salts as **photopolymn.** initiators)

IT 65859-86-1, Lithium butyltriphenylborate 120307-06-4, Tetrabutylammonium butyltriphenylborate 141714-54-7 141714-63-8 153146-33-9, Tetrabutylphosphonium butyltriphenylborate 157075-01-9 179128-74-6 179268-23-6  
RL: CAT (Catalyst use); USES (Uses)  
(near-IR-sensitive **photosensitive** compn. for lithog. plates contg. cationic dye organoboron salts and B salts as **photopolymn.** initiators)

IT 26351-99-5 29570-58-9, Dipentaerythritol hexaacrylate  
RL: TEM (Technical or engineered material use); USES (Uses)  
(near-IR-sensitive **photosensitive** compn. for lithog. plates contg. cationic dye organoboron salts and B salts as **photopolymn.** initiators)

L48 ANSWER 62 OF 78 CA COPYRIGHT 2003 ACS  
 AN 124:356052 CA  
 TI UV-sensitive polyarylates as **photolithographic** emulsions  
 AU Noniewicz, Konrad; Brzozowski, Zbigniew K.; Zadrozna, Irmrina  
 CS Dep. Speciality Polymers, Warsaw Univ. Technology, Warsaw, 00-662, Pol.  
 SO Journal of Applied Polymer Science (1996), 60(7), 1071-82  
 CODEN: JAPNAB; ISSN: 0021-8995  
 PB Wiley  
 DT Journal  
 LA English  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 35, 36  
 AB Several UV-sensitive polyarylates based on bisbenzylidenoketones for use as potential **photolithog.** emulsions were obtained by interfacial polycondensation. The structures of obtained UV-sensitive monomers and polymers were confirmed by IR, 1H-NMR, and UV spectroscopies. Mech. and dielec. properties of the obtained polyarylates (including dielec. loss factor, dielec. const., vol. and surface resistivity, and dielec. strength) were evaluated. The investigations show that some of the new polymers obtained in this study may find application as

photoresists.  
 ST photolithog photoresist photochem  
 interfacial condensation polymn; dielec loss tensile strength  
 photopolymer photoresist  
 IT Ultraviolet and visible spectra  
 (UV-sensitive polyarylates based on bisbenzylidenoketones as  
 photoresists obtained by interfacial polycondensation)  
 IT Dielectric constant and dispersion  
 Dielectric loss  
 (dielec. properties of UV-sensitive polyarylates based on  
 bisbenzylidenoketones as photoresists)  
 IT Polymerization  
 (interfacial, photochem., UV-sensitive polyarylates based on  
 bisbenzylidenoketones as photoresists obtained by interfacial  
 polycondensation)  
 IT Lithography  
 Resists  
 (photo-, UV-sensitive polyarylates based on  
 bisbenzylidenoketones as photoresists obtained by interfacial  
 polycondensation)  
 IT Crosslinking  
 (photochem., UV-sensitive polyarylates based on  
 bisbenzylidenoketones as photoresists obtained by interfacial  
 polycondensation)  
 IT Molecular structure-property relationship  
 (tensile, UV-sensitive polyarylates based on bisbenzylidenoketones as  
 photoresists obtained by interfacial polycondensation)  
 IT 56-37-1, Triethylbenzylammonium chloride  
 RL: CAT (Catalyst use); USES (Uses)  
 (UV-sensitive polyarylates based on bisbenzylidenoketones as  
 photoresists obtained by interfacial polycondensation)  
 IT 39281-45-3P 39281-59-9P, Bisphenol A, benzenedicarboxylic acid,  
 copolymer, SRU 176854-00-5P 176854-02-7P 176854-03-8P 176854-04-9P  
 176854-06-1P 176854-08-3P 176854-09-4P 176854-10-7P 176854-11-8P  
 RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or  
 engineered material use); PREP (Preparation); USES (Uses)  
 (UV-sensitive polyarylates based on bisbenzylidenoketones as  
 photoresists obtained by interfacial polycondensation)

L48 ANSWER 63 OF 78 CA COPYRIGHT 2003 ACS  
 AN 123:354721 CA  
 TI Manufacture of planographic printing plates providing improved high  
 quality prints  
 IN Kudo, Shinji; Maehashi, Tatsuichi; Watanabe, Hiroshi; Komamura, Tawara  
 PA Konishiroku Photo Ind, Japan  
 SO Jpn. Kokai Tokkyo Koho, 18 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM G03F007-00  
 ICS G03F007-004; G03F007-34  
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)

| FAN.CNT 1          | PATENT NO.   | KIND     | DATE          | APPLICATION NO. | DATE |
|--------------------|--|----------|---------------|-----------------|------|
| PI JP 07244373     | A2   | 19950919 | JP 1994-33826 | 19940303        |      |
| PRAI JP 1994-33826 |  | 19940303 |               |                 |      |
| AB                 | The title manuf. involves (1) peel-developing a photosensitive<br>material comprised of a substrate, a photosensitive layer contg.<br>a polymerizable compd. and a photopolymer. initiator, and a cover<br>sheet and (2) transferring the developed images formed on the substrate or<br>the cover sheet onto a printing plate support, where the substrate and/or<br>the cover sheet is capable of transmitting an actinic ray. The<br>photosensitive layer may contain a cationic dye borate complex |          |               |                 |      |

and/or an org. borate capable of IR absorbing.  
 ST planog printing plate peel development  
 IT Lithographic plates  
 Printing plates  
     (planog., manuf. of planog. printing plates providing improved high  
     quality prints)  
 IT 136107-30-7 141714-54-7 162628-51-5D, Kayasorb CY 10, salt with  
     butyltriphenyl borate  
     RL: DEV (Device component use); USES (Uses)  
         (photosensitive layer contg.)  
 IT 25038-59-9, Poly(ethylene terephthalate), uses  
     RL: DEV (Device component use); USES (Uses)  
         (substrate of photosensitive material comprising)

L48 ANSWER 64 OF 78 CA COPYRIGHT 2003 ACS  
 AN 123:127620 CA  
 TI Method of forming a three-dimensional colored article  
 IN McLean, Colin Henry; Gregory, Peter  
 PA Zeneca Ltd., UK  
 SO PCT Int. Appl., 19 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 IC ICM B29C067-00  
 ICS G03C009-08  
 CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and Other  
     Reprographic Processes)

FAN.CNT 1

|      | PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE     |  |
|------|--|------|----------|-----------------|----------|--|
| PI   | WO 9501257   | A1   | 19950112 | WO 1994-GB1427  | 19940701 |  |
|      | W: AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, GE,<br>HU, JP, KE, KG, KP, KR, KZ, LK, LU, LV, MD, MG, MN, MW, NL, NO,<br>NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, US, UZ, VN<br>RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE,<br>BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG   |      |          |                 |          |  |
|      | AU 9470072   | A1   | 19950124 | AU 1994-70072   | 19940701 |  |
|      | EP 706451  | A1   | 19960417 | EP 1994-918984  | 19940701 |  |
|      | R: BE, CH, DE, DK, FR, GB, LI, NL  |      |          |                 |          |  |
|      | JP 08512001  | T2   | 19961217 | JP 1994-503370  | 19940701 |  |
| PRAI | GB 1993-13723  |      | 19930702 |                 |          |  |
|      | WO 1994-GB1427   |      | 19940701 |                 |          |  |
| AB   | A method of forming a 3-dimensional article having .gtoreq.1 selectively<br>colored zone comprises: (1) subjecting successive layers of a liq.<br>photopolymerizable resin compn. contg. a color former, a developer<br>and an IR absorber, to a programmed beam of electromagnetic<br>radiation of a wavelength outside the IR region of the spectrum<br>thereby effecting polymn. of the photopolymerizable resin compn.<br>to form successive layers of solid substantially polymd. resin compn. and<br>wherein adjacent layers become cohesively integrated as they are formed<br>such that they define the structure of the 3-dimensional article, and (2)<br>subjecting the photopolymerizable resin or each layer of the<br>solid substantially polymd. resin compn. to a programmed beam of<br>IR light thereby effecting color development or color change in<br>.gtoreq.1 zones. |      |          |                 |          |  |
| ST   | colored article photopolymerizable compn   |      |          |                 |          |  |
| IT   | Photoimaging compositions and processes<br>(Method of forming a three-dimensional colored article)   |      |          |                 |          |  |
| IT   | Lithography<br>(stereo-, Method of forming a three-dimensional colored article)  |      |          |                 |          |  |
| IT   | 80-05-7, uses 1552-42-7, Crystal violet lactone 26570-48-9, Sr 344<br>28961-43-5 41637-38-1, Ethoxylated Bisphenol A Dimethacrylate<br>109851-29-8 156930-26-6, Pro-Jet 900NP 165905-28-2 165943-63-5,<br>NeoRad NR 2720<br>RL: MOA (Modifier or additive use); POF (Polymer in formulation); USES   |      |          |                 |          |  |

(Uses)  
(stereo-lithog. photoimaging compn.)

L48 ANSWER 65 OF 78 CA COPYRIGHT 2003 ACS  
AN 122:326138 CA  
TI Photochemical transformation of C60 and C70 films  
AU Eklund, P. C.; Rao, A. M.; Zhou, Ping; Wang, Ying; Holden, J. M.  
CS Department of Physics and Astronomy, Center for Applied Energy Research,  
University of Kentucky, Lexington, KY, 40506, USA  
SO Thin Solid Films (1995), 257(2), 185-203  
CODEN: THSFAP; ISSN: 0040-6090  
PB Elsevier  
DT Journal; General Review  
LA English  
CC 74-0 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reproductive Processes)  
AB Thin solid films of C60 and C70 have been found to be sensitive to  
UV-visible light. In the absence of oxygen, which acts as a triplet state  
quencher, C60 and C70 have been obsd. to phototransform from a  
toluene-sol. to a toluene-insol. state. This phototransformation  
has been studied via Raman and FTIR spectroscopies, UV-visible  
transmission spectroscopy and laser desorption mass spectroscopy. The  
results of these expts. have been interpreted as evidence for a  
phototransformation from a van der Waals solid to one in which the  
fullerenes are linked by covalent bonds. For C60, it is proposed that a  
transformation to a polymeric solid has occurred, whereas a similar flux  
of UV-visible light applied to C70 is proposed to lead to a random  
dimerization of the lattice and a much smaller population of higher  
oligomers. For both phototransformed C60 and C70, the covalent  
bonds between fullerenes can be broken thermally and the  
phototransformed material returns to the pristine, toluene-sol.  
state. UV-visible light can also be used to photochem. assist  
the diffusion of dioxygen into the interstitial voids in the solid C60 and  
C70 lattices. For C60, a photochem. enhancement of the O<sub>2</sub>  
diffusion rate by a factor of .apprx.10 is obsd. by alpha particle  
backscattering, leading to a stoichiometry of .apprx.C60O<sub>2</sub>. Similar to  
C60-polyfullerene, C60(O<sub>2</sub>)<sub>x</sub> is also toluene insol. As a result, these  
C60-based films might find photolithog. applications. A review  
with 79 refs.  
ST review photopolymn fullerene photoenhanced oxygen  
diffusion  
IT Infrared spectra  
    Photochemistry  
    Raman spectra  
        (photopolymn. and photoenhanced diffusion of oxygen  
        into interstitial voids in fullerene lattice)  
IT Fullerenes  
    RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC  
    (Process); RACT (Reactant or reagent)  
        (photopolymn. and photoenhanced diffusion of oxygen  
        into interstitial voids in fullerene lattice)  
IT Lithography  
    (photo-, photopolymn. and photoenhanced  
    diffusion of oxygen into interstitial voids in fullerene lattice)  
IT Dimerization  
Polymerization  
    (photochem., photopolymn. and photoenhanced  
    diffusion of oxygen into interstitial voids in fullerene lattice)  
IT 7782-44-7, Oxygen, reactions 99685-96-8, C60 Fullerene 115383-22-7,  
Fullerene C70  
    RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC  
    (Process); RACT (Reactant or reagent)  
        (photopolymn. and photoenhanced diffusion of oxygen  
        into interstitial voids in fullerene lattice)

L48 ANSWER 66 OF 78 CA COPYRIGHT 2003 ACS

AN 121:289655 CA

TI Photopolymerizable composition containing squaraines  
IN Yamaoka, Tsuguo; Koseki, Kenichi; Obara, Mitsuhashi; Shimizu, Ikuo; Ito,  
Yukiyoshi; Kawato, Hitoshi

PA Kyowa Hakko Kogyo Co., Ltd., Japan

SO PCT Int. Appl., 37 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

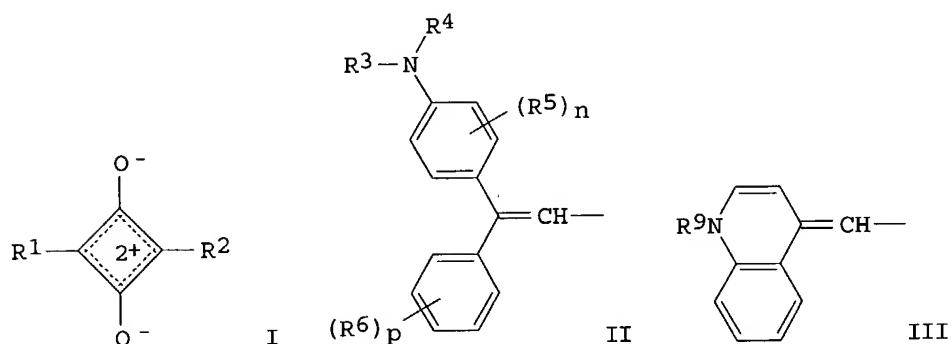
IC ICM G03F007-031

CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reproductive Processes)

FAN.CNT 3

|      | PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE     |
|------|--|------|----------|-----------------|----------|
| PI   | WO 9401806   | A1   | 19940120 | WO 1993-JP932   | 19930707 |
|      | W: CA, JP, US  |      |          |                 |          |
|      | RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE |      |          |                 |          |
|      | EP 611997  | A1   | 19940824 | EP 1993-914964  | 19930707 |
|      | EP 611997  | B1   | 20030212 |                 |          |
|      | R: CH, DE, FR, GB, LI  |      |          |                 |          |
|      | EP 1113335   | A1   | 20010704 | EP 2001-106388  | 19930707 |
|      | R: CH, DE, FR, GB, LI  |      |          |                 |          |
|      | JP 3202989   | B2   | 20010827 | JP 1994-503173  | 19930707 |
| PRAI | JP 1992-185224   | A    | 19920713 |                 |          |
|      | EP 1993-914964   | A3   | 19930707 |                 |          |
|      | WO 1993-JP932  | W    | 19930707 |                 |          |

GI



AB The title photopolymerizable compn. contains an addn.-polymerizable compd. having .gtoreq.1 ethylenically unsatd. double bond (s), a free-radical generator, and a squarylium compd. I [R1, R2 = II (R3, 4 = H, alkyl, aryl, aralkyl; R5 = halo, alkyl, alkoxy, nitro, OH; n = 0-4; when n = 2-4, R5 may be the same or different; R6 = R5, CN, trifluoromethyl, NR7R8; R7, R8 = R3; p = 0-5, when p = 2-5, R6 may be the same or different), III (R9 = alkyl), etc.]. The compn. is highly sensitive to visible and near-IR rays, esp., a He-Ne laser, a light-emitting diode, a semiconductor laser, etc., each emitting light having a wavelength range >600 nm; the compn. is useful as the material of holograms, presensitized lithog. plates for laser direct platemaking, dry film resists, digital proof, photosensitive microcapsules, etc.

ST near IR photopolymg compn squaraine

IT Resists

(photo-, dry-film; photopolymerizable compn. highly  
sensitive to visible and near-IR rays for)

IT Photoimaging compositions and processes

(photopolymerizable, photopolymerizable compn.  
highly sensitive to visible and near-IR rays)

IT Lithographic plates  
(presensitized, photopolymerizable compn. highly sensitive to  
visible and near-IR rays for)

IT 3524-68-3, Pentaerythritol triacrylate 6542-67-2, 2, 4,  
6-Tris(trichloromethyl)-s-triazine  
RL: TEM (Technical or engineered material use); USES (Uses)  
(photopolymerizable compn. highly sensitive to visible and  
near-IR rays)

IT 156057-15-7 156057-17-9 159094-53-8 159094-54-9 159094-55-0  
159094-56-1  
RL: TEM (Technical or engineered material use); USES (Uses)  
(prepn. of squaraines for photopolymerizable compn. highly  
sensitive to visible and near-IR rays)

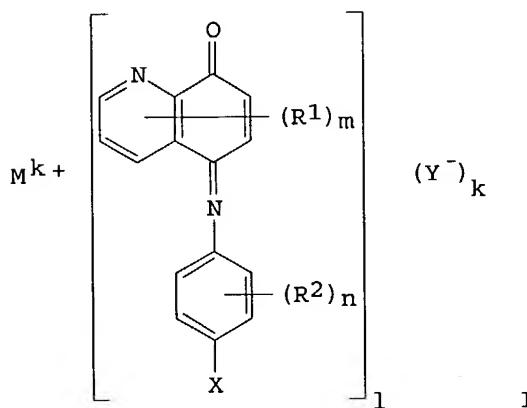
IT 135596-19-9 159094-57-2  
RL: TEM (Technical or engineered material use); USES (Uses)  
(squaraines for photopolymerizable compn. highly sensitive to  
visible and near-IR rays)

L48 ANSWER 67 OF 78 CA COPYRIGHT 2003 ACS  
AN 121:69570 CA  
TI Photopolymerizable composition for printing platemaking  
IN Komamura, Tawara; Watanabe, Hiroshi; Maehashi, Tatsuichi; Nakatani,  
Koichi; Kato, Katsunori  
PA Konishiroku Photo Ind, Japan  
SO Jpn. Kokai Tokkyo Koho, 10 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM G03F007-029  
ICS G03F007-00; G03F007-027; G03F007-028  
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reproductive Processes)

FAN.CNT 1

|      | PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|------|---------------|------|----------|-----------------|----------|
| PI   | JP 05216227   | A2   | 19930827 | JP 1992-21321   | 19920206 |
| PRAI | JP 1992-21321 |      | 19920206 |                 |          |

GI



AB The photopolymerizable compn. contains as photopolymer initiator, (I) [R<sub>1</sub>, R<sub>2</sub> = H, halo, monovalent substituent; X = OH, NR<sub>3</sub>R<sub>4</sub> (R<sub>3</sub>, R<sub>4</sub> = H, alkyl); R<sub>2</sub> and R<sub>3</sub> or R<sub>4</sub> may form a ring; Y<sup>-</sup> = anion; M = transition element; k = 1-3; l = 2,3; m = 1-5; n = 1-4]. The photopolymerizable compn. is esp. useful in presensitized lithog.

printing plates sensitive to visible and IR radiation.

ST lithog platemaking photopolymerizable compn; metal complex initiator photopolymerizable compn

IT Polymerization catalysts (photo-, metal complex)

IT Lithographic plates (presensitized, photosensitive compn. for, IR -sensitive)

IT 120307-06-4 153146-33-9 156060-41-2

RL: USES (Uses) (metal complex salt contg., photopolymn. initiators from) 7440-18-8D, Ruthenium, complexes with oxoquinoline derivs. 7440-48-4D, Cobalt, complexes with oxoquinoline derivs. 153121-11-0D, cobalt complexes 156074-15-6D, complexes with cobalt and ruthenium 156074-16-7D, ruthenium complexes 156074-17-8D, ruthenium complexes 156074-18-9D, ruthenium complexes 156188-89-5 156188-91-9

RL: USES (Uses) (photopolymn. initiator)

L48 ANSWER 68 OF 78 CA COPYRIGHT 2003 ACS  
AN 117:121305 CA  
TI The synthesis and photosensitivity of eleostearic acid-resorcinol series phenolic resins  
AU Wang, Liyuan; Yu, Shangxian  
CS Inst. Appl. Chem., Beijing Norm. Univ., Beijing, 100875, Peop. Rep. China  
SO Journal of Photopolymer Science and Technology (1991), 4(1), 23-9  
CODEN: JSTEEW; ISSN: 0914-9244  
DT Journal  
LA English  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 37  
AB A series of eleostearic acid(I)-resorcinol(II) phenolic resins were synthesized, mainly including I-II CH<sub>2</sub>O resin (softening point: 70.apprx.75.degree.), Me eleostearate-II-CH<sub>2</sub>O resin (softening point: 65.apprx.70.degree.) N-hydroxyethyl eleostearic amide-II-CH<sub>2</sub>O (softening point: 85.apprx.90.degree.). The relative mol. wts. detd. by gel-permeation chromatog. method are Mn: 5.0 .times. 103.apprx.1.0 .times. 104, Mw: 1.0 .times. 104.apprx.4.0 .times. 104, d:3.0.apprx.6.0. The reaction products were characterized by IR and elemental anal. Photosensitivity was investigated of the photopolymers formed from these phenolic resins and 2,6-bis(azidobenzal)-4-methylcyclohexanone. These neg. photoresists can be developed in dil. aq. base. The min. exposure energy required is 10.apprx.20 mJ/cm<sup>2</sup>. Clear etched image with 3 .mu.m line width was obtained. The photocured films have excellent resistance to acids.

ST photoresist eleostearic acid resorcinol phenolic resin

IT Resists (photo-, eleostearic acid-resorcinol-formaldehyde polymers for)

IT Lithography (photo-, synthesis and photosensitivity of eleostearic acid-resorcinol phenolic resins for)

IT 5284-79-7

RL: USES (Uses) (photosensitivity of photoresists contg. eleostearic acid-resorcinol-formaldehyde polymers and)

IT 140622-97-5P 140636-75-5P

RL: PREP (Preparation) (synthesis and photosensitivity and photoresist)

L48 ANSWER 69 OF 78 CA COPYRIGHT 2003 ACS  
AN 113:123869 CA  
TI Light-sensitive compositions  
IN Kawamura, Kouichi; Matsumoto, Hirotaka; Yamaguchi, Jun

**photopolymer** surface, av. size of secondary formations in various parts of a printing element, and relative intensity of several absorption bands in the IR spectra of **photopolymers**, as functions of the no. of imprints. The wear begins with an intense mech. deterioration, working-in processes, increasing crystallinity, changes in supramol. structure, oxidn. degrdn., which continue until (75-100) .times. 103 printings. This stage is followed by stabilization and normal mechanochem. abrasive wear of the material until (300-350) .times. 103 printings. The last stage (>350 .times. 103 printings) is characterized by decreased crystallinity and increased oxidn. degrdn. The wear of plates was reduced by short-term thermodiffusional treatment in H<sub>2</sub>O-glycerol soln. contg. KI as a stabilizer and an inhibitor of thermopolymn.

ST **photopolymer** printing plate wear mechanism  
 IT Wear  
     (of **photopolymeric** printing plates, mechanism of)  
 IT Crystallinity  
     Surface structure  
         (of **photopolymeric** printing plates, wear mechanism in relation to)  
 IT Lithographic plates  
     (photpolymeric, wear mechanism and ways to increase durability of)  
 IT Polymer degradation  
     (oxidative, in wear of **photopolymeric** printing plates)  
 IT Printing plates  
     (photpolymerizable, wear mechanism and ways to increase durability of)  
 IT Polymer morphology  
     (surface, changes in, during wear of **photopolymeric** printing plates)  
 IT 56-81-5, uses and miscellaneous  
     RL: USES (Uses)  
         (thermodiffusional treatment of **photopolymeric** printing plates in aq. soln. contg. potassium iodide and, for improved durability)  
 IT 7681-11-0, uses and miscellaneous  
     RL: USES (Uses)  
         (thermodiffusional treatment of **photopolymeric** printing plates in aq.-glycerol soln. contg., for improved durability)

L48 ANSWER 73 OF 78 CA COPYRIGHT 2003 ACS  
 AN 99:30769 CA  
 TI Increasing the adhesion of organic photolithographic layers to inorganic surfaces  
 IN Lapcik, Lubomir; Blazej, Anton; Lodes, Antonin; Cappan, Michal; Valasek, Jaroslav; Zelenay, Emil; Mosny, Jan; Skyrta, Jan  
 PA Czech.  
 SO Czech., 6 pp.  
 CODEN: CZXXA9  
 DT Patent  
 LA Slovak  
 IC G03F007-16  
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 76

FAN.CNT 1

|      | PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE     |
|------|--------------|------|----------|-----------------|----------|
| PI   | CS 201102    | B    | 19801031 | CS 1979-2396    | 19790409 |
| PRAI | CS 1979-2396 |      | 19790409 |                 |          |

AB Adhesion of an org. **photolithog.** layer to inorg. surfaces (Al printing plates, semiconductor substrates, and the like) is increased by exposure of the inorg. surface to polychromatic electromagnetic radiation (.lambda. = 0.01-100 .mu.m; 0.01-100 W/cm<sup>2</sup>) before coating of the org.

layer in soln. and/or a **photosensitizer** (PhCHO, PhCOCl, or PhCOBr). A vacuum chamber for this procedure, with a rotating carrier for the support to be treated, sources of IR and UV radiation, and inlets of gas and liqs., is described. Thus, a Si disk (diam. 37 mm) with a 0.5 .mu.m SiO<sub>2</sub> layer was rotated (4000 rpm) and irradiated with a 200 W IR source and a 500 W UV lamp in vacuum for 3 min, coated with a soln. of 0.5 mL 0.01M PhCHO in heptane, UV irradiated for 3 min, and overcoated with a light-sensitive polymer varnish.

ST **photolithog** polymer adhesion promotion  
IT Adhesion  
    (of **photolithog. photosensitive** polymeric material,  
    to inorg. supports, enhancement of)  
IT Infrared radiation, chemical and physical effects  
    Ultraviolet radiation, chemical and physical effects  
    (on adhesion of **photolithog. photosensitive**  
    polymeric material to inorg. supports)  
IT Electric circuits  
    (**photopolymeric** materials for prepn. of, enhancement of  
    adhesion of)  
IT Printing plates  
    (**photopolymeric** systems for prodn. of, enhancement of  
    adhesion of)  
IT Lithography  
    (photo-, adhesion enhancement of **photosensitive**  
    layer to substrate for)  
IT Resists  
    (photo-, adhesion enhancement of polymeric, to inorg.  
    supports)  
IT 98-88-4 100-52-7, properties 618-32-6  
RL: USES (Uses)  
    (adhesion of **photolithog.** assembly contg. layer of, to  
    silicon disk, enhancement of)  
IT 7440-21-3, properties  
RL: PRP (Properties)  
    (**photolithog. photosensitive** polymeric compn.  
    adhesion to disk of, enhancement of)  
IT 7429-90-5, uses and miscellaneous  
RL: USES (Uses)  
    (printing plate supports from, adhesion enhancement of  
    **photopolymeric** systems to)

L48 ANSWER 74 OF 78 CA COPYRIGHT 2003 ACS  
AN 97:64096 CA  
TI Analysis of **photopolymers** on electrochemically roughened and  
anodized aluminum plates by fourier transform **infrared**  
reflection absorption spectrometry  
AU Yamamoto, Takeshi; Kitaura, Takeshi; Shimomura, Masaki; Matsui, Tomoko;  
Tanaka, Shigeyuki  
CS Res. Lab., Konishiroku Photo. Ind. Co., Ltd., Hino, 191, Japan  
SO Nippon Kagaku Kaishi (1982), (5), 727-31  
CODEN: NKAKB8; ISSN: 0369-4577  
DT Journal  
LA Japanese  
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reproductive Processes)  
Section cross-reference(s): 73  
AB **Photopolymers** on Al plates were studied by reflection absorption  
spectrometry using a Fourier transform **IR** spectrometer. Samples  
were prep'd. by coating **photopolymers**, viz, diazo resin type  
polymer (mixt. of a copolymer of 2-hydroxyethyl methacrylate, methacrylic  
acid, etc. and a copolymer of 4-diazoniadiphenylamine chloride and HCHD)  
or poly(vinyl cinnamate) on the electrochem. roughened and anodized Al  
plates (roughness value; Rz = 4.8 .mu.m, Rmax = 5.6 .mu.m, Ra = 0.7 .mu.m,  
Rs = 0.9 .mu.m, the quantity of Al oxide 0.15 mg/cm<sup>2</sup>). These samples are  
widely used as presensitized offset printing plates (PS plates) in the

printing industry. Spectra of the samples before and after light exposure were measured, and these spectral ratios were calcd. and spectral changes with exposure were detected for both **photopolymers**. The relationship between the exposed energy and the amt. of **photochem** reacted polymers was obtained using some key bands, which were 1730, 1710, and 1630 cm<sup>-1</sup> for poly(vinyl cinnamate), and 1580 and 1110 cm<sup>-1</sup> for diazo resin. All the amt. of diazo resin on the Al plate reacted completely after std. exposure, but on the other hand, only 25% of poly(vinyl cinnamate) reacted. Relations between the quantity of diazo resin type polymers and the intensity of both bands at 1720 cm<sup>-1</sup> and at 1480 cm<sup>-1</sup> which are independent of **photochem**. changes, were examd., and the linear relationships were found so far as the quantity was less than 100 .mu.g/cm<sup>2</sup> (1720 cm<sup>-1</sup>), and less than 200 .mu.g/cm<sup>2</sup> (1480 cm<sup>-1</sup>). A characteristic curve of the diazo resin type PS plate was established. Very small amt. of the diazo resin type polymer (.apprx.3 .mu.g/cm<sup>2</sup>) on nonimage area remaining after exposure and development was detected for the 1st time, and the effect of this residue on scumming which occurs during long-run printing is discussed.

ST photopolymer printing plate IR spectra

IT Lithographic plates

(Fourier transformed IR reflection spectra of photopolymers on aluminum)

IT Vinyl compounds, polymers

RL: USES (Uses)

(polymers, Fourier transform IR reflection spectra of, on aluminum lithog. plates)

IT Infrared spectra

(reflection, of photopolymers on electrochem. roughened and anodized aluminum plates)

IT 24968-99-8 30939-08-3

RL: PRP (Properties)

(IR reflection spectra of, on aluminum lithog. plates)

L48 ANSWER 75 OF 78 CA COPYRIGHT 2003 ACS

AN 90:178195 CA

TI Photopolymer formation

IN Kurita, Yoshio

PA Konishiroku Photo Industry Co., Ltd., Japan

SO Ger. Offen., 50 pp.

CODEN: GWXXBX

DT Patent

LA German

IC G03C001-68

CC 74-8 (Radiation Chemistry, Photochemistry, and Photographic Processes)

FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | DE 2824928     | A1   | 19781214 | DE 1978-2824928 | 19780607 |
|      | JP 54002720    | A2   | 19790110 | JP 1977-68075   | 19770608 |
|      | JP 57012136    | B4   | 19820309 |                 |          |
|      | GB 1604869     | A    | 19811216 | GB 1978-24773   | 19780531 |
|      | US 4251619     | A    | 19810217 | US 1979-105540  | 19791220 |
| PRAI | JP 1977-68075  |      | 19770608 |                 |          |
|      | US 1978-913213 |      | 19780606 |                 |          |

AB Photopolymerizable compns. of high sensitivity and which give a polymer image with outstanding phys., chem., and **photog**. characteristics are composed of an activating component, such as a free-radical forming org. halogen compd., a light-sensitive resin, and a colorizable or decolorizable component, such as a dye. Thus, a soln. contg. Eslec BLS [poly(vinyl butyral)] 1.0, ethylene glycol dimethacrylate 0.6, tribromomethyl Ph sulfone 0.2, N-vinylcarbazole 0.3 g, p-methoxyphenol 6, 4-(p-dimethylaminostyryl)quinoline 20 mg, and Me<sub>2</sub>CO 20 mL was coated under safelight conditions on a poly(ethylene terephthalate) support, dried (dry thickness 5 .mu.m), a polyethylene top layer laminated thereon, and the material exposed through a pos. original for 6 s with a 2

kW high-pressure Hg lamp. Subsequently the whole surface of the material was exposed to a 250-W IR lamp having a yellow filter. A violet image resulted. The polyethylene film was then removed and a paper contacted with the light-sensitive layer for 3 s at 100.degree.. Upon removal of the paper, the nonexposed portion of the image remained adhered to the paper and was then toned to give a pos. image.

ST photopolymer image formation; imaging photosensitive polymer

IT Photoimaging compositions and processes  
(contg. colorizable or decolorizable component, free-radical forming org. halogen compd., and light-sensitive resin)

IT Lithographic plates  
(photopolymerizable compns. contg. colorizable or decolorizable component, free-radical forming org. halogen compd. and light-sensitive resin for)

IT Vinyl acetal polymers  
RL: USES (Uses)  
(butyral, photopolymerizable compns. contg., for image formation)

IT Dyes  
(leuco, photopolymerizable compns. contg., for image formation)

IT Electric circuits  
(printed, photopolymerizable compns. contg. colorizable or decolorizable component, free-radical forming org. halogen compd., and light-sensitive resin for fabrication of)

IT 75-95-6 86-93-1 90-94-8 97-90-5 100-10-7 102-54-5 119-58-4  
123-31-9, uses and miscellaneous 128-39-2 129-73-7 150-76-5  
558-13-4 603-48-5 897-55-2 1003-67-4 1484-13-5 1484-88-4  
1628-58-6 3127-41-1 3524-68-3 5459-38-1 7402-45-1 9003-53-6  
9004-57-3 9011-14-7 17025-47-7 31303-63-6 51202-80-3 70021-90-8  
70021-91-9D, benzals with poly(vinyl alc.)  
RL: USES (Uses)  
(photopolymerizable compns. contg., for image formation)

L48 ANSWER 76 OF 78 CA COPYRIGHT 2003 ACS  
AN 86:198013 CA  
TI Dry positive photopolymer imaging process involving heating and application of toner  
IN Schlesinger, Sheldon I.; Boszak, Ronald J.  
PA American Can Co., USA  
SO U.S., 8 pp.  
CODEN: USXXAM  
DT Patent  
LA English  
IC G03F007-08  
NCL 096033000  
CC 74-8 (Radiation Chemistry, Photochemistry, and Photographic Processes)  
FAN.CNT 1

|    | PATENT NO. | KIND | DATE     | APPLICATION NO. | DATE     |
|----|------------|------|----------|-----------------|----------|
| PI | US 3997344 | A    | 19761214 | US 1974-486169  | 19740705 |
|    | US 4054732 | A    | 19771018 | US 1976-690308  | 19760526 |

PRAI US 1974-486169 19740705  
AB Photocrosslinkable polymeric layers contg. a polymer prep'd. from glycidyl acrylate (and methacrylate if desired) and alkyl glycidyl ether and an arylidonium salt of a complex halide, which releases a catalyst for cross-linking upon exposure, are imagewise exposed, heated to the softening-tacky point of the nonexposed areas, and dusted with toner powder which adheres only to the nonexposed tacky areas. Thus, a Mylar support was coated with a compn. contg. glycidyl acrylate-allyl glycidyl ether polymer 9, butyronitrile 75.9, o-chlorotoluene 15.2, and 2,5-diethoxy-4-(p-tolylthio)benzenediazonium hexafluorophosphate 0.45 g, exposed for 0.5-1 s at 22cm from a 360 W Gates Raymaster Uriarc lamp through a transparency, heated for 15 s at 60-70.degree. under an

IR heat lamp, dusted with Xerox 917 copier toner, and brushed with a pad of absorbent cotton to give a black pos. reprodn. of the original.

ST photopolymer dry imaging toner

IT Lithographic plates  
Photoduplication  
(photohardenable glycidyl acrylate-allyl glycidyl ether polymeric layers contg. aryl diazonium salt catalyst precursor for, dry toner development of tacky nonimage areas in)

IT Photoimaging compositions and processes  
(photocrosslinkable, contg. glycidyl acrylate-allyl glycidyl ether polymer and aryl diazonium salt catalyst precursor for pos. image formation)

IT 63023-15-4  
RL: USES (Uses)  
(photohardenable compn. contg., for pos. image formation)

IT 38686-70-3  
RL: USES (Uses)  
(photoimaging comp. contg. glycidyl acrylate-allyl glycidyl ether polymer and)

IT 63027-27-0 63027-28-1  
RL: USES (Uses)  
(photoimaging compn. contg. aryl diazonium salt catalyst precursor and, for dry toner-developed pos. copies)

L48 ANSWER 77 OF 78 CA COPYRIGHT 2003 ACS  
AN 72:116817 CA  
TI Photographic production of printing plates and relief images  
IN Williams-Foxcroft, Stanley G.  
PA Forcroft Inventions (Proprietary) Ltd.  
SO Brit., 7 pp.  
CODEN: BRXXAA  
DT Patent  
LA English  
IC G03C  
CC 74 (Radiation Chemistry, Photochemistry, and Photographic Processes)  
FAN.CNT 1

| PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|---------------|------|----------|-----------------|----------|
| PI GB 1181114 |      | 19700211 | GB              | 19670616 |

AB Relief images are produced by placing a backing sheet and a transparency bearing an opaque image in spaced and parallel relation with the space between the backing sheet and transparency filled with light-hardening, fluid polymerizable material, locating an ir-absorbing uv-transmitting filter above the transparency, projecting uv-radiation from a strong source through the filter and nonopaque portions of the transparency, and sepg. the fluid material from the hardened material. The surface of the backing sheet is pretreated with an epoxy resin-hardener-polyester resin mixt. to ensure good adhesion of the hardened polymer. A typical light-hardening polymerizable layer is prep'd. from a mixt. contg. polyester resins 14, isophthalic polyester resins 2, catalyst (U.V. 50) 1, and styrene monomer 2 parts.

ST photographic polyesters; lithographic polyesters; polyesters photopolymers; printing plates photopolymers; plates printing photopolymers; photopolymers printing plates; relief images

IT Printing  
(plates, photopolymerizable compns. for relief)

L48 ANSWER 78 OF 78 CA COPYRIGHT 2003 ACS  
AN 65:53609 CA  
OREF 65:10003c-d  
TI Lithographic printing plates and their preparation  
IN Wiswell, Charles M.  
PA S. D. Warren Co.  
SO 4 pp.

DT Patent  
LA Unavailable  
NCL 101149200  
CC 11 (Radiation Chemistry and Photochemistry)

FAN.CN1 1

|    | PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|----|---|------|----------|-----------------|----------|
| PI | US 3259061  |      | 19660705 | US              | 19640311 |
| AB | A lithographic printing plate is prep'd. by placing a flexible sheet with surface layer of delayed-tack resin face-to-face with a sheet bearing a heat-absorptive image on a less heat-absorptive background, irradiating the image with ir until the image is softened and rendered tacky in the delayed-tack resin, thereby forming an inverted image. The inverted image is cooled below its fusion temp., and the tacky inverted image is placed in face-to-face contact with a lithographic plate to transfer the inverted image to the lithographic plate as a direct oleophilic image. |      |          |                 |          |
| IT | <b>Lithography</b><br>(plates for, by transfer of tacky image to heat-sensitive resin compn.)   |      |          |                 |          |
| IT | <b>Printing</b><br>(plates, by photopolymerization, and of easy repair)   |      |          |                 |          |

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NEWS 13 Nov 18 DKILIT has been renamed APOLLIT  
NEWS 14 Nov 25 More calculated properties added to REGISTRY  
NEWS 15 Dec 04 CSA files on STN  
NEWS 16 Dec 17 PCTFULL now covers WP/PCT Applications from 1978 to date

NEWS 17 Dec 17 TOXCENTER enhanced with additional content  
NEWS 18 Dec 17 Adis Clinical Trials Insight now available on STN  
NEWS 19 Jan 29 Simultaneous left and right truncation added to COMPENDEX,  
ENERGY, INSPEC  
NEWS 20 Feb 13 CANCERLIT is no longer being updated  
NEWS 21 Feb 24 METADEX enhancements  
NEWS 22 Feb 24 PCTGEN now available on STN  
NEWS 23 Feb 24 TEMA now available on STN  
NEWS 24 Feb 26 NTIS now allows simultaneous left and right truncation  
NEWS 25 Feb 26 PCTFULL now contains images  
NEWS 26 Mar 04 SDI PACKAGE for monthly delivery of multifile SDI results  
NEWS 27 Mar 19 APOLLIT offering free connect time in April 2003  
NEWS 28 Mar 20 EVENTLINE will be removed from STN  
NEWS 29 Mar 24 PATDPAFULL now available on STN  
NEWS 30 Mar 24 Additional information for trade-named substances without  
structures available in REGISTRY  
NEWS 31 Apr 11 Display formats in DGENE enhanced  
NEWS 32 Apr 14 MEDLINE Reload  
NEWS 33 Apr 17 Polymer searching in REGISTRY enhanced  
NEWS 34 Apr 21 Indexing from 1947 to 1956 being added to records in CA/CAPLUS  
NEWS 35 Apr 21 New current-awareness alert (SDI) frequency in  
WPIDS/WPINDEX/WPIX  
NEWS 36 Apr 28 RDISCLOSURE now available on STN  
  
NEWS EXPRESS April 4 CURRENT WINDOWS VERSION IS V6.01a, CURRENT  
MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP),  
AND CURRENT DISCOVER FILE IS DATED 01 APRIL 2003  
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Sandblasting  
 (light-sensitive resin compn. for dry resist film developable with visible light and resistant towards sand blasting and method for cutting material applied with same according to sand blasting)

IT 9004-38-0, KC 71 9050-31-1, HP 55 25086-15-1, Methacrylic acid/methyl methacrylate copolymer  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (alkali polymerizable resin; light-sensitive resin compn. for dry resist film developable with visible light and resistant towards sand blasting)

IT 118996-06-8 120307-06-4, Tetrabutylammonium butyltriphenylborate  
 211675-36-4, Tetrabutylammonium butyltri(4-methyl-1-naphthyl)borate  
 219125-19-6, Tetrabutylammonium butyltri(1-naphthyl)borate 219125-21-0  
 219125-22-1, 3,7-Diamino-2,8-dimethyl-5-phenylphenazinium tetrafluoroborate  
 RL: CAT (Catalyst use); USES (Uses)  
 (borate compd.; light-sensitive resin compn. for dry resist film developable with visible light and resistant towards sand blasting)

IT 989-38-8, Basic Red 1 4657-00-5, Basic Orange 22 12217-48-0, Basic Red 14  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (sensitizing dye; light-sensitive resin compn. for dry resist film developable with visible light and resistant towards sand blasting)

IT 178359-46-1, KRM 7222 190673-86-0, Shikoh UV 9510EA 216680-53-4, UAS-C 9PMA 216680-57-8, Shikoh UT 2313 216680-60-3, Shikoh UV 9532  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (urethane acrylate; light-sensitive resin compn. for dry resist film developable with visible light and resistant towards sand blasting)

L1 ANSWER 2 OF 9 CA COPYRIGHT 2003 ACS  
 AN 130:45295 CA  
 TI Photosensitive resin composition with improved sandblast resistance, dry film using it, and cutting method using them  
 IN Obitani, Hiroyuki  
 PA Tokyo Ohka Kogyo Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 12 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM G03F007-027  
 ICS G03F007-029; G03F007-40; H01J011-02  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 38

FAN.CNT 1

|      | PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE     |
|------|--|------|----------|-----------------|----------|
| PI   | JP 10293400  | A2   | 19981104 | JP 1997-116170  | 19970418 |
| PRAI | JP 1997-116170   |      | 19970418 |                 |          |
| AB   | The photosensitive resin compn., which is exposed to visible light, comprises (a) urethane (meth)acrylates with .gtoreq.2 (meth)acryloyl group, (b) an alkali sol. polymer with 50-250 mg/KOH acid value, and (c) a titanocene and .gtoreq.1 of an acridine and a triazine as a polymn. initiator component. The dry film comprises a support subsequently having thereon a coated layer with sandblast resistance comprising the photosensitive resin compn. and a protective layer. A processable material is cut by the following processes: (1) the photosensitive resin compn. is laminated on the material; (2) the photosensitive resin layer is imagewise exposed directly by visible light, (3) the layer is developed and selectively removed to form a pattern; (4) the material is cut through the pattern mask by a sandblast processing. The compn. shows high elasticity and flexibility, superior alkali developability and adhesion to the material and is useful for sandblast mask. |      |          |                 |          |
| ST   | photoresist sandblast mask; urethane acrylate alkali soluble polymer   |      |          |                 |          |

photoresist; photopolymer initiator titanocene acridine triazine  
 photoresist  
 IT Polyurethanes, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (acrylic; photoresist compn. contg. urethane acrylate and alkali-sol.  
 polymer useful for sandblast mask)

IT Polymerization catalysts  
 (photopolymer.; photoresist contg. titanocene, acridine and/or triazine  
 compd. as photopolymer. initiator)

IT Photoresists  
 Sandblasting  
 (photoresist compn. contg. urethane acrylate and alkali-sol. polymer  
 useful for sandblast mask)

IT 9004-38-0, KC 71 9050-31-1, HP 55 15625-89-5,  
 Trimethylolpropane triacrylate 178359-46-1, KRM 7222 190673-86-0, UV  
 9510EA 216680-53-4, UAS-C 9PMA 216680-57-8, Shikoh UT 2313  
 216680-60-3, UV 9532  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (photoresist compn. contg. urethane acrylate and alkali-sol. polymer  
 useful for sandblast mask)

IT 602-56-2, 9-Phenylacridine 93709-38-7 172600-80-5  
 RL: CAT (Catalyst use); USES (Uses)  
 (photoresist contg. titanocene, acridine and/or triazine compd. as  
 photopolymer. initiator)

L1 ANSWER 3 OF 9 CA COPYRIGHT 2003 ACS  
 AN 127:42258 CA  
 TI Photosensitive resin composition and photosensitive resin laminated film  
 containing the same  
 IN Obiya, Hiroyuki; Mizusawa, Ryuma  
 PA Tokyo Ohka Kogyo Co., Ltd., Japan  
 SO Eur. Pat. Appl., 25 pp.  
 CODEN: EPXXDW

DT Patent  
 LA English  
 IC ICM G03F007-027  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)

FAN.CNT 1

|      | PATENT NO.   | KIND | DATE     | APPLICATION NO.  | DATE     |
|------|--|------|----------|------------------|----------|
| PI   | EP 770923  | A1   | 19970502 | EP 1996-117273   | 19961028 |
|      | EP 770923  | B1   | 20020327 |                  |          |
|      | R: DE, FR, GB  |      |          |                  |          |
|      | JP 09127692  | A2   | 19970516 | JP 1995-303921   | 19951027 |
|      | JP 09152713  | A2   | 19970610 | JP 1995-336217   | 19951130 |
|      | TW 475098  | B    | 20020201 | TW 1996-85113079 | 19961024 |
|      | US 5776995   | A    | 19980707 | US 1996-738079   | 19961025 |
|      | US 5919569   | A    | 19990706 | US 1997-971585   | 19971117 |
| PRAI | JP 1995-303921   | A    | 19951027 |                  |          |
|      | JP 1995-336217   | A    | 19951130 |                  |          |
|      | US 1996-738079   | A3   | 19961025 |                  |          |
| AB   | A photosensitive resin compn. comprises (A) a photopolymerizable urethane (meth)acrylate compd. contg. at least two acryloyl or methacryloyl groups, (B) an alkali-sol. polymer compd. having an acid value of from 50 to 250 mgKOH/g, and (C) a photopolymer. initiator, wherein the photosensitive resin compn. has an elec. insulation resistance of 8.0x10 <sup>9</sup> to 1.0x10 <sup>14</sup> .OMEGA..cntdot.cm after photocuring. A photosensitive resin laminated film comprises a flexible film, a photosensitive layer provided on the flexible film, and a releasable film layer provided on the photosensitive layer, wherein the photosensitive layer comprises the above photosensitive resin compn. |      |          |                  |          |
| ST   | photoresist photopolymerizable urethane acrylate sandblast mask  |      |          |                  |          |
| IT   | Polyurethanes, uses<br>RL: TEM (Technical or engineered material use); USES (Uses)   |      |          |                  |          |

(acrylates; sandblast mask prepn. using photopolymerizable compns.  
 contg. alkali-sol. polymers and)  
 IT Sandblasting  
 (masks; photopolymerizable compns. contg. urethane (meth)acrylates and  
 alkali-sol. polymers for)  
 IT Photoresists  
 (photopolymerizable; contg. urethane (meth)acrylates and alkali-sol.  
 polymers)  
 IT Polyoxalkylenes, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (sandblast mask prepn. using photopolymerizable compns. contg.  
 alkali-sol. polymers and)  
 IT 9004-38-0, Cellulose acetate phthalate 21245-01-2 25322-69-4  
 32760-80-8, Irgacure 261 68015-88-3, 4-Morpholino-2,5-  
 dibutoxybenzenediazonium hexafluorophosphate 76293-13-5,  
 2,4-Dimethylthioxanthone 118690-08-7, Irgacure 500 178359-46-1, KRM  
 7222 190521-29-0 190673-83-7, UA-T 01 190673-85-9, Shikoh UT 9510  
 190673-86-0, Shikoh UV 9510EA  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (sandblast mask prepn. using photopolymerizable compns. contg.  
 alkali-sol. polymers and)

L1 ANSWER 4 OF 9 CA COPYRIGHT 2003 ACS  
 AN 126:67499 CA  
 TI Photosensitive resin composition for sandblast resist  
 IN Takehana, Hiroshi; Yamamoto, Tetsuo; Obiya, Hiroyukio; Mizusawa, Ryuma  
 PA Matsushita Electronics Corporation, Japan; Tokyo Ohka Kogyo Co., Ltd.  
 SO Eur. Pat. Appl., 14 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 IC ICM G03F007-027  
 ICS B24C001-04  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)

| FAN.CNT 1 | PATENT NO.  | KIND | DATE     | APPLICATION NO.  | DATE     |
|-----------|---|------|----------|------------------|----------|
| PI        | EP 741332   | A1   | 19961106 | EP 1996-302975   | 19960426 |
|           | EP 741332   | B1   | 20000809 |                  |          |
|           | R: DE, FR, GB, NL   |      |          |                  |          |
|           | JP 08305017   | A2   | 19961122 | JP 1995-107703   | 19950501 |
|           | US 5756261  | A    | 19980526 | US 1996-638189   | 19960426 |
|           | TW 439014   | B    | 20010607 | TW 1996-85105015 | 19960426 |
|           | CN 1140843  | A    | 19970122 | CN 1996-108446   | 19960501 |
|           | CN 1082679  | B    | 20020410 |                  |          |
|           | US 5916738  | A    | 19990629 | US 1998-18729    | 19980204 |
| PRAI      | JP 1995-107703  | A    | 19950501 |                  |          |
|           | US 1996-638189  | A3   | 19960426 |                  |          |
| AB        | A photosensitive resin compn. suitable as a resist material against sandblasting for patternwise engraving of the surface of a body after photolithog. patterning comprises (a) a urethane compd. having a (meth)acrylate group at the mol. end, which is obtained from a polyether or polyester compd. having a hydroxy group at the mol. chain end, a diisocyanate compd., and a (meth)acrylate compd. having a hydroxy group, (b) an alkali-sol. polymeric compd. having an acid value in the range from 50 to 250 mg KOH/g, and (c) a photopolymn. initiator. |      |          |                  |          |
| ST        | photoresist compn urethane acrylate sandblasting mask   |      |          |                  |          |
| IT        | Polyurethanes, uses   |      |          |                  |          |
|           | RL: TEM (Technical or engineered material use); USES (Uses)<br>(acrylates; photosensitive resin compns. for sandblasting mask prepns.<br>contg.)  |      |          |                  |          |
| IT        | Photoresists<br>(contg. urethane acrylates for sandblasting mask prepns.)   |      |          |                  |          |
| IT        | Sandblasting  |      |          |                  |          |

(masks; photosensitive resin compns. for prepn. of)  
IT 9004-38-0, Cellulose acetate phthalate 15625-89-5,  
Trimethylolpropane triacrylate 24650-42-8 26182-64-9,  
Acrylonitrile-butyl methacrylate-methacrylic acid copolymer 68224-29-3,  
Hexamethylene diisocyanate-2-hydroxyethyl methacrylate-polyethylene glycol  
copolymer 75980-60-8, 2,4,6-Trimethylbenzoyldiphenylphosphine oxide  
76246-04-3, .epsilon.-Caprolactone-hexamethylene diisocyanate-2-  
hydroxyethyl acrylate copolymer 82799-44-8, 2,4-Diethylthioxanthone  
185250-85-5, Adipic acid-2,2-bis(hydroxymethyl)propionic  
acid-2-hydroxyethyl acrylate-isophorone diisocyanate-propylene glycol  
copolymer 185250-89-9, Hexamethylene diisocyanate-1,6-hexanediol-2-  
hydroxyethyl acrylate-succinic anhydride copolymer 185250-91-3  
RL: TEM (Technical or engineered material use); USES (Uses)  
(photosensitive resin compns. for sandblasting mask prepns. contg.)

L1 ANSWER 5 OF 9 CA COPYRIGHT 2003 ACS  
AN 125:71878 CA  
TI Photosensitive resin compositions and photosensitive dry films using them  
IN Obitani, Hiroyuki; Saito, Akihiko; Mizusawa, Tatsuma  
PA Tokyo Ohka Kogyo Co Ltd, Japan  
SO Jpn. Kokai Tokkyo Koho, 13 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM G03F007-027  
ICS G03F007-027; B32B027-30; G03F007-004; G03F007-028; G03F007-033  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)

FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 08054734    | A2   | 19960227 | JP 1994-211861  | 19940812 |
| PRAI | JP 1994-211861 |      | 19940812 |                 |          |

AB The title compns. contain a carboxy-modified urethane (meth)acrylate having .gtoreq.2 (meth)acryloyl groups, an **acid value** of 20-70 mg/KOH, and a glass transition temp. (Tg) of 5-95.degree. after hardening, an alkali-sol. polymer having an **acid value** of 50-250 mg/KOH, and a photopolymn. initiator. The compns. are capable of forming films on glasses, ceramics, phosphors, etc. and show good uniformity in thickness, adhesion, storage stability, alkali-developability, and resistance to sandblast. The dry films, comprising a layer made of the compns. and sandwiched by flexible and releasing films, are also claimed. Thus, a photosensitive resin compn. comprised Shikoh UT-9510EA (carboxy-modified urethane acrylate; **acid value** 40 mg/KOH; Tg 63.degree.), KC-71 (cellulose acetate phthalate; **acid value** 120 mg/KOH), trimethylolpropane triacrylate, and Lucirin TPO (photopolymn. initiator).

ST photosensitive resin compn urethane acrylate; alkali sol resin  
photosensitive compn; photopolymn initiator photosensitive resin compn;  
modified urethane acrylate photosensitive compn; sandblast resistance  
photosensitive dry film

IT Photoimaging compositions and processes  
(photosensitive dry films contg. modified urethane acrylate compds. for  
sandblast resistance)

IT Urethane polymers, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(acrylic, carboxy-modified; photosensitive dry films contg. modified  
urethane acrylate compds. for sandblast resistance)

IT Acrylic polymers, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(polyurethane-, carboxy-modified; photosensitive dry films contg.  
modified urethane acrylate compds. for sandblast resistance)

IT 9004-38-0, KC 71  
RL: TEM (Technical or engineered material use); USES (Uses)  
(cellulose acetate phthalate; photosensitive dry films contg. modified

urethane acrylate compds. for sandblast resistance)  
IT 119-61-9, Benzophenone, uses 947-19-3, 1-Hydroxycyclohexylphenylketone  
75980-60-8, Lucirin TPO 100752-97-4, Diethylthioxanthone  
RL: MOA (Modifier or additive use); USES (Uses)  
(photopolymn. initiator; photosensitive dry films contg. modified  
urethane acrylate compds. for sandblast resistance)  
IT 110-17-8D, Fumaric acid, reaction products with pentaerythritol acrylates  
3524-68-3D, Pentaerythritol triacrylate, reaction products with fumaric  
acid 15625-89-5, Trimethylolpropane triacrylate 35326-25-1,  
Acrylonitrile-butyl methacrylate-methyl methacrylate copolymer  
178359-46-1, KRM 7222 178359-57-4, Shikoh UT 1777 178359-58-5, Shikoh  
UT 1790 178359-59-6, Shikoh UT 9510EA  
RL: TEM (Technical or engineered material use); USES (Uses)  
(photosensitive dry films contg. modified urethane acrylate compds. for  
sandblast resistance)

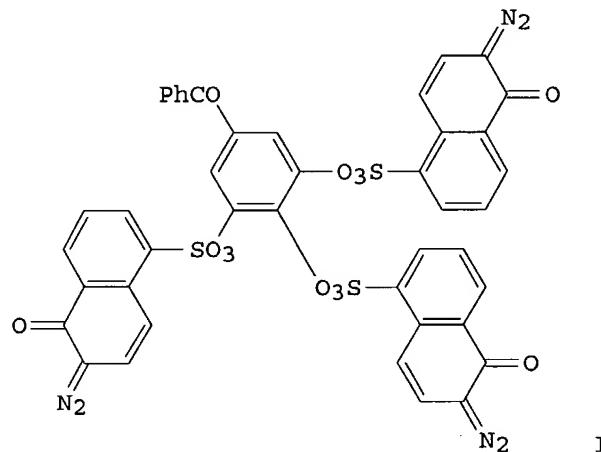
L1 ANSWER 6 OF 9 CA COPYRIGHT 2003 ACS  
AN 116:27996 CA  
TI Concept and development of ophthalmic pseudo-latexes triggered by pH  
AU Ibrahim, H.; Bindschaedler, C.; Doelker, E.; Buri, P.; Gurny, R.  
CS Sch. Pharm., Univ. Geneva, Geneva, 1211, Switz.  
SO International Journal of Pharmaceutics (1991), 77(2-3), 211-19  
CODEN: IJPHDE; ISSN: 0378-5173  
DT Journal  
LA English  
CC 63-5 (Pharmaceuticals)  
AB The apparent pKa, **acid value** and max. buffer capacity  
were calcd. for various polyacids generally utilized for enteric coating,  
in order to select a polymeric model compd. for the prepn. of  
pseudo-latexes triggered by pH for ophthalmic application. The solv. of  
the selected polymer (cellulose acetate phthalate) was estd. from a  
ternary plot of its solvents vs. fractional solv. parameters.  
Pseudo-latexes were prep'd. by emulsification of various org. polymer  
solns. and removal of the solvents by vacuum distn. The viscosity  
behavior of 30% by wt. pseudo-latexes was simulated in vitro to show the  
sharp and high increase of their viscosity vs. pH.  
ST ophthalmic polymer pseudolatex pH  
IT Solution rate  
(of polymers for pseudolatexes for ophthalmic use, lacrimal pH  
triggering in relation to)  
IT Ionization in liquids  
Viscosity  
(of polymers in pseudolatexes for ophthalmic use, lacrimal pH  
triggering in relation to)  
IT pH  
(of tears, ophthalmic polymer pseudolatexes triggered by)  
IT Solvent effect  
(on solv. of polymers for ophthalmic pseudolatexes)  
IT Tear  
(pH of, ophthalmic polymer pseudolatexes triggered by)  
IT Polymers, biological studies  
RL: BIOL (Biological study)  
(pseudolatexes, for ophthalmic suspensions triggered by lacrimal pH)  
IT Pharmaceutical dosage forms  
(suspensions, ophthalmic, polymer pseudolatexes for, triggered by  
lacrimal pH)  
IT 9004-32-4, Duodcel 9004-38-0, Cellulose acetate phthalate  
9050-31-1, Hydroxypropyl methyl cellulose phthalate 25609-89-6, Crotonic  
acid-vinyl acetate copolymer 26589-39-9, Eudragit S 53237-50-6  
54578-91-5, Gantrez ES-425  
RL: BIOL (Biological study)  
(ophthalmic pseudolatex, for dispersions triggered by lacrimal pH)  
IT 12408-02-5  
RL: BIOL (Biological study)  
(pH, of tears, ophthalmic polymer pseudolatexes triggered by)

IT 78-93-3, 2-Butanone, properties 108-10-1, Methyl isobutyl ketone  
 108-94-1, Cyclohexanone, properties 120-92-3, Cyclopentanone 141-78-6,  
 Ethyl acetate, properties 141-79-7, Mesityl oxide  
 RL: PRP (Properties)  
 (solvent systems contg., cellulose acetate phthalate solv. in,  
 ophthalmic pseudolatexes in relation to)

L1 ANSWER 7 OF 9 CA COPYRIGHT 2003 ACS  
 AN 96:190670 CA  
 TI Photoreprographic sheet  
 PA Agfa-Gevaert N. V., Belg.  
 SO Jpn. Kokai Tokkyo Koho, 14 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC G03C001-72; G03F001-00  
 ICA G03C001-52; G03C001-71  
 CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)  
 FAN.CNT 1  

|      | PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE     |
|------|--------------|------|----------|-----------------|----------|
| PI   | JP 56132333  | A2   | 19811016 | JP 1981-22144   | 19810216 |
| PRAI | GB 1980-5649 |      | 19800220 |                 |          |

 GI



AB A support is coated with a dye- or pigment-contg. subbing layer made of an alk. soln.-sol. non-gelatin binder, and coated with an alk. soln.-development type photosensitive resin compn. to give a photocopying sheet. The binder is selected from CO<sub>2</sub>H group-contg. resins whose total acid value is 90-350, which are insol. in pure water at 20.degree. but sol. in a 0.5% NaOH soln. at 20.degree.. Thus, a glass bead-coated plastic film was coated with a compn. contg. Et acrylate-methacrylic acid-Me methacrylate copolymer (19.5:30:52.5) 2, carbon black 2, and a BuH<sub>2</sub>PO<sub>4</sub>-Bu<sub>2</sub>HPO<sub>4</sub> mixt. (1:1) 0.15 g, and subsequently coated with a compn. contg. Alnovol PN 430 2 and I 1 g to give a photoreprog. sheet.  
 ST photosensitive resin copying sheet  
 IT Photoimaging compositions and processes  
 (photosensitive resin, subbing layers for)  
 IT 7585-41-3 9004-38-0 25086-15-1 25133-97-5 29382-68-1  
 RL: USES (Uses)  
 (coatings, subbing, for photosensitive resin reprog. sheets)

IT 4986-89-4 5610-94-6 13468-27-4 17292-57-8  
 RL: USES (Uses)  
     (photosensitive resin compns. contg., for photoreprog. sheets)  
 IT 9003-35-4  
 RL: USES (Uses)  
     (photosensitive resin compns. contg., for reprog. sheets)  
  
 L1 ANSWER 8 OF 9 CA COPYRIGHT 2003 ACS  
 AN 92:32017 CA  
 TI Photosensitive resin compositions  
 IN Higuchi, Tetsuo; Kokawa, Tomoo  
 PA Kansai Paint Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 8 pp.  
     CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC C08F020-36; C08F002-44; C08F002-50; C08F299-06  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic Processes)  
 FAN.CNT 1

|      | PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|------|---------------|------|----------|-----------------|----------|
| PI   | JP 54014491   | A2   | 19790202 | JP 1977-79710   | 19770704 |
|      | JP 62000924   | B4   | 19870110 |                 |          |
| PRAI | JP 1977-79710 |      | 19770704 |                 |          |

AB Photopolymn. type photosensitive resins for printing plates are composed of: (1) a photopolymerizable unsatd. acrylurethane 20-90; (2) an alk. soln.-sol. polymer having good miscibility with the acrylurethane 10-80, and (3) a sensitizer. The acrylurethane compd. is prep'd. by reacting (a) 1 eq. (calcd. on the basis of OH group) of .alpha.,.alpha.-di(hydroxymethyl)propionic acid(I), .alpha.,.alpha.-di(hydroxymethyl)butyric acid(II) or polyester polyol (no. of OH groups 2-10) obtained from I or II with (b)  $(2/n)-1$  ( $n =$  no. of OH groups/mol. in a) equiv. of (meth)acrylic ester group-contg. monoisocyanate compd. The photosensitive resin compns. exhibit excellent shelf life and give relief images having good moisture resistance. Thus, I 134(1), 1,6-hexanediol 234(2), and adipic acid 292 g(2 mol) were reacted at 150-200.degree. to give a polyesterpolyol (acid value 93 mgKOH/g). Sep., tolylenediisocyanate 1740 (10), 3,5-di-tert-butyl-4-hydroxytoluene 0.304, and 2-hydroxyethyl methacrylate 1300 g (10 mol) were reacted to give a monoisocyanate compd. The polyesterpolyol and the monoisocyanate compd. were reacted in MeCOEt in the presence of dibutyltin dilaurate to give a carboxyacrylurethane. The carboxyaerylurethane 75, cellulose acetate phthalate 40, and benzoin Et ether 1 g were dissolved in Me<sub>2</sub>CO and the soln. was coated on an Al support. The plate was imagewise exposed and developed with 0.2% NaOH to give a relief printing plate having excellent mech. property and resoln.

ST photosensitive resin acrylurethane; printing plate photosensitive acrylurethane  
 IT Thickening agents  
     (cellulose derivs. and acrylic polymers, for polyurethane photoresists)  
 IT Printing plates  
     (from polyurethane photoresists)  
 IT Urethane polymers, uses and miscellaneous  
 RL: USES (Uses)  
     (photoresists, for printing plates)  
 IT Urethane polymers, uses and miscellaneous  
 RL: USES (Uses)  
     (polyester-, photoresists, for printing plates)  
 IT Printing plates  
     (relief, photosensitive resin compns. contg. acrylurethanes for)  
 IT Printing plates  
     (screen, photosensitive resin compns. contg. acrylurethanes for)  
 IT 61-73-4 90-94-8 105-59-9 119-53-9 119-61-9, uses and miscellaneous  
     574-09-4 6320-14-5 9004-38-0 9011-16-9 9032-35-3  
     9050-31-1 22499-11-2 24650-42-8 27306-39-4 72013-15-1 72013-16-2

72099-92-4 72099-93-5 72108-83-9 72394-11-7  
 RL: USES (Uses)  
     (photosensitive resin compns. contg., for printing plates)  
 IT 72013-14-0 72013-15-1 72013-16-2 72032-83-8 72032-84-9  
     72035-31-5  
 RL: USES (Uses)  
     (printing plates)  
 IT 9004-38-0 9032-35-3 9050-31-1 27306-39-4 53200-28-5  
 RL: USES (Uses)  
     (thickeners, for polyurethane photoresists, for printing plates)  
  
 L1 ANSWER 9 OF 9 CA COPYRIGHT 2003 ACS  
 AN 84:158042 CA  
 TI Photosensitive resin composite for relief printing plates  
 IN Horike, Akihiro; Ohkawa, Kazumi; Shingu, Tadashi  
 PA Teijin, Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC G03F; G03C; B41D  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic Processes)  
 FAN.CNT 1

|      | PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|------|---------------|------|----------|-----------------|----------|
| PI   | JP 50137201   | A2   | 19751031 | JP 1974-42109   | 19740417 |
| PRAI | JP 1974-42109 |      | 19740417 |                 |          |

AB A photosensitive assembly consisting of an appropriate support and a composite of a liq. photosensitive resin layer and a solid photosensitive resin layer is useful for prep. high-precision, high-resoln. printing plate relief images. Relief images of uniform thickness are obtained regardless of fluctuations in the thickness of the solid resin layer as long as one side of the solid resin layer is flat and smooth. The prepn. of such solid resin films is considerably easier than prepn. of uniform thickness layers. Thus, cellulose acetate phthalate 66, triethylene glycol diacrylate 34, benzoin ethyl ether 0.7, p-methoxyphenol 0.01, and Sumiburasuto Violet RR 0.05 part were dissolved in acetone and coated (.apprx.70.mu.) on a poly(ethylene terephthalate) support to give a solid photosensitive resin film. Sep. an unsatd. polyester (**acid value** 150, prepd. by reacting trimellitic anhydride 10, maleic anhydride 50, and diethylene glycol 45 parts at 200.degree., 3 hr)60, acrylamide 10, ethylene glycol dimethacrylate 20, benzoin ethyl ether 1, and N-nitrosodiphenylamine 0.006 part by wt. were mixed to give a liq. photosensitive resin. Th liq. resin was coated over an adhesive layer formed on an antihalation layer on an Fe plate, and the solid resin film was placed on the liq. resin layer to give a total photosensitive resin layer thickness of 700 .mu.. The plate was then imagewise exposed through a negative with a uv fluorescent lamp for 6 min, then the poly(ethylene terephthalate) film was stripped off, and th photosensitive resin layer was developed with aq. 1% Na<sub>2</sub>CO<sub>3</sub> to give a printing plate having a relief image of uniform thickness. High quality clear prints were obtained by using the printing plate.  
 ST printing plate photopolymer composite  
 IT Printing plates  
     (relief, photopolymerizable liq.-solid composite for prepn. of)  
 IT 79-06-1, uses and miscellaneous 86-30-6 97-90-5 574-09-4 1680-21-3  
     9004-38-0 58970-14-2  
 RL: USES (Uses)  
     (photopolymerizable compn. contg., for relief printing plate prepn.)

=> log y  
 COST IN U.S. DOLLARS  
 FULL ESTIMATED COST

| SINCE FILE ENTRY | TOTAL SESSION |
|------------------|---------------|
| 33.11            | 33.32         |

| DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) | SINCE FILE ENTRY | TOTAL SESSION |
|--|------------------|---------------|
| CA SUBSCRIBER PRICE                        | -5.58            | -5.58         |

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NEWS 5 Aug 19 Aquatic Toxicity Information Retrieval (AQUIRE)  
now available on STN  
NEWS 6 Aug 26 Sequence searching in REGISTRY enhanced  
NEWS 7 Sep 03 JAPIO has been reloaded and enhanced  
NEWS 8 Sep 16 Experimental properties added to the REGISTRY file  
NEWS 9 Sep 16 CA Section Thesaurus available in CAPLUS and CA  
NEWS 10 Oct 01 CASREACT Enriched with Reactions from 1907 to 1985  
NEWS 11 Oct 24 BEILSTEIN adds new search fields  
NEWS 12 Oct 24 Nutraceuticals International (NUTRACEUT) now available on STN  
NEWS 13 Nov 18 DKILIT has been renamed APOLLIT  
NEWS 14 Nov 25 More calculated properties added to REGISTRY  
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NEWS 17 Dec 17 TOXCENTER enhanced with additional content  
NEWS 18 Dec 17 Adis Clinical Trials Insight now available on STN  
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ENERGY, INSPEC  
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NEWS 22 Feb 24 PCTGEN now available on STN  
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NEWS 25 Feb 26 PCTFULL now contains images  
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NEWS 27 Mar 19 APOLLIT offering free connect time in April 2003  
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NEWS 29 Mar 24 PATDPAFULL now available on STN  
NEWS 30 Mar 24 Additional information for trade-named substances without  
structures available in REGISTRY  
NEWS 31 Apr 11 Display formats in DGENE enhanced  
NEWS 32 Apr 14 MEDLINE Reload  
NEWS 33 Apr 17 Polymer searching in REGISTRY enhanced  
NEWS 34 Apr 21 Indexing from 1947 to 1956 being added to records in CA/CAPLUS  
NEWS 35 Apr 21 New current-awareness alert (SDI) frequency in  
WPIDS/WPINDEX/WPIX  
NEWS 36 Apr 28 RDISCLOSURE now available on STN  
  
NEWS EXPRESS April 4 CURRENT WINDOWS VERSION IS V6.01a, CURRENT  
MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP),  
AND CURRENT DISCOVER FILE IS DATED 01 APRIL 2003

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| NEWS LOGIN | Welcome Banner and News Items                           |
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| NEWS WWW   | CAS World Wide Web Site (general information)           |

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DICTIONARY FILE UPDATES: 30 APR 2003 HIGHEST RN 508165-25-1

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2003

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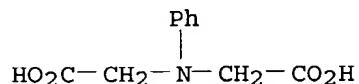
Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:  
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=> S ANILINO DIACETIC ACID  
32499 ANILINO  
7477 DIACETIC  
5879569 ACID  
L1 1 ANILINO DIACETIC ACID  
(ANILINO(W)DIACETIC(W)ACID)

11 > d

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2003 ACS  
RN 1137-73-1 REGISTRY  
CN Glycine, N-(carboxymethyl)-N-phenyl- (9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN Acetic acid, (phenylimino)di- (6CI, 7CI, 8CI)  
OTHER NAMES:

CN (Phenylimino)diacetic acid  
CN Anilinediacetic acid  
CN **Anilinodiacetic acid**  
CN N-(Carboxymethyl)anilinoacetic acid  
CN N-Phenyliminodiacetic acid  
FS 3D CONCORD  
MF C10 H11 N O4  
CI COM  
LC STN Files: BEILSTEIN\*, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS,  
CSCHEM, GMELIN\*, HODOC\*, IFICDB, IFIPAT, IFIUDB, TOXCENTER, USPATFULL  
(\*File contains numerically searchable property data)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

77 REFERENCES IN FILE CA (1957 TO DATE)  
16 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
77 REFERENCES IN FILE CAPLUS (1957 TO DATE)  
7 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

| => file ca           |  | SINCE FILE | TOTAL   |
|----------------------|--|------------|---------|
| COST IN U.S. DOLLARS |  | ENTRY      | SESSION |
| FULL ESTIMATED COST  |  | 14.74      | 14.95   |

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FILE LAST UPDATED: 24 Apr 2003 (20030424/ED)

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(FILE 'HOME' ENTERED AT 15:18:34 ON 01 MAY 2003)

FILE 'REGISTRY' ENTERED AT 15:18:46 ON 01 MAY 2003  
L1 1 S ANILINO DIACETIC ACID

FILE 'CA' ENTERED AT 15:19:33 ON 01 MAY 2003

=> s 11 and photo?

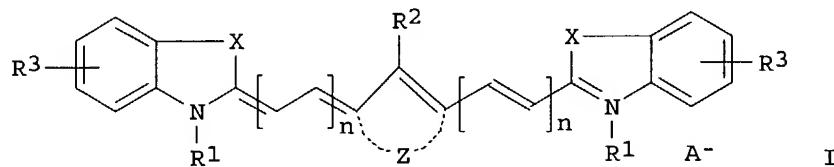
77 L1  
1143616 PHOTO?  
L2 12 L1 AND PHOTO?

=> d all 1-12

L2 ANSWER 1 OF 12 CA COPYRIGHT 2003 ACS  
AN 133:230415 CA  
TI IR-sensitive composition and manufacture of printing plate using the same  
IN Hauck, Gerhard; Savariar-Hauck, Celin; Timpe, Hans-Joachim  
PA Kodak Polychrome Graphics G.m.b.H., Germany  
SO Ger. Offen., 12 pp.  
CODEN: GWXXBX  
DT Patent  
LA German  
IC ICM G03F007-038  
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)  
FAN.CNT 1  

| PATENT NO.            | KIND | DATE     | APPLICATION NO.  | DATE     |
|-----------------------|------|----------|------------------|----------|
| DE 19906823           | A1   | 20000914 | DE 1999-19906823 | 19990218 |
| DE 19906823           | C2   | 20020314 |                  |          |
| PRAI DE 1999-19906823 |      | 19990218 |                  |          |
| OS MARPAT 133:230415  |      |          |                  |          |

  
GI



AB The invention relates to the IR-sensitive compn. including the initiator system comprised of (a) IR-dye represented by general formula I (X = S, O, NR, C(alkyl)2; R1 = alkyl; R2 = halo, SR, OR, NR2; R3 = H, alkyl, OR, SR, NR2, halo; A- = anion; Z = atoms for forming 5- to 6-membered ring; R = alkyl, aryl, H; n = 0-3), (b) polyhaloalkyl-substituted compd., and (c) polycarboxylic acid. The compn. shows high light stability, printing durability, and developer-resistance.  
ST photopolymer initiator IR sensitive compn printing plate manuf  
IT Photoimaging materials  
(photopolymerizable; IR-sensitive compn. contg. specified  
photopolymer initiator system for manufg. printing plate)  
IT Polymerization catalysts  
(photopolymer.; IR-sensitive compn. contg. specified  
photopolymer initiator system for manufg. printing plate)  
IT Printing plates  
(photosensitive; IR-sensitive compn. contg. specified  
photopolymer initiator system for manufg. printing plate)  
IT 1137-73-1, Anilinodiacetic acid 3584-23-4, 2-(4-Methoxyphenyl)-  
4,6-bis(trichloromethyl)-s-triazine 6542-67-2, 2,4,6-  
Tris(trichloromethyl)-s-triazine 17025-47-7, Tribromomethylphenylsulfone  
145094-16-2, 2-Phenyl-4,6-bis(chloromethyl)-s-triazine 205744-92-9  
269401-43-6 292047-58-6  
RL: CAT (Catalyst use); USES (Uses)  
(in photopolymer initiator system in IR-sensitive compn. for  
manufg. printing plate)  
RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
RE  
(1) Anon; US 5496903 A CA

(2) Anon; DE 69222987 T2  
 (3) Anon; EP 730201 A1 CA

L2 ANSWER 2 OF 12 CA COPYRIGHT 2003 ACS  
 AN 132:341205 CA  
 TI Photopolymerizable resin composition and material containing the composition for forming image on lithographic plate  
 IN Hino, Etsuko; Nagao, Takumi; Urano, Toshiyoshi  
 PA Mitsubishi Chemical Industries Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 23 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM G03F007-028  
 ICS C08F002-48; G03F007-004; G03F007-027; H01L021-027  
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 35, 38  
 FAN.CNT 1

| PATENT NO.           | KIND  | DATE     | APPLICATION NO. | DATE     |
|----------------------|-------|----------|-----------------|----------|
| -----                | ----- | -----    | -----           | -----    |
| PI JP 2000131839     | A2    | 20000512 | JP 1998-324730  | 19981116 |
| PRAI JP 1998-232586  | A     | 19980819 |                 |          |
| OS MARPAT 132:341205 |       |          |                 |          |

AB The compn. contains addn.-polymerizable compd. involving .gtoreq.1 ethylenically unsatd. double bond and photopolyrn. initiator system contg. a titanocene as radical activator and a compd. involving 2 carboxylate or carbonamide groups linked to N in aniline structure through alkylene chains. The material for image formation, preferably a lithog. plate, consists of a support and a layer made of the photopolymerizable compn. showing improved solvent solv. and high sensitivity.

ST photopolymerizable resin compn lithog plate; photopolyrn. initiator titanocene radical activator; solvent solv sensitivity photopolymerizable imaging material; amino acid diester diamide photopolyrn. initiator

IT Lithographic plates  
 (photopolymerizable compn. having initiator system contg. titanocenes and amino acid diester or diamide for lithog. plate)

IT Polymerization catalysts  
 (photopolyrn.; photopolymerizable compn. having initiator system contg. titanocenes and amino acid diester or diamide for lithog. plate)

IT Carbon black, uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (pigment; in photopolymerizable compn. having initiator system contg. titanocenes and amino acid diester or diamide for lithog. plate)

IT 55932-12-2 98269-30-8 113762-37-1 125051-32-3 267876-69-7  
 267876-70-0 267876-71-1  
 RL: CAT (Catalyst use); USES (Uses)  
 (photopolymerizable compn. having initiator system contg. titanocenes and amino acid diester or diamide for lithog. plate)

IT 53733-94-1P  
 RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)  
 (photopolymerizable compn. having initiator system contg. titanocenes and amino acid diester or diamide for lithog. plate)

IT 203742-63-6P, Acrylic acid-styrene copolymer (3,4-epoxycyclohexyl)methyl acrylate ester 220122-98-5P, Isobutyl acrylate-isobutyl methacrylate-methacrylic acid-methyl methacrylate copolymer (3,4-dihydroxycyclohexyl)methyl acrylate ester 267878-65-9P, Acrylic acid-.alpha.-methylstyrene copolymer (3,4-dihydroxycyclohexyl)methyl acrylate ester  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material

use); PREP (Preparation); USES (Uses)  
 (photopolymerizable compn. having initiator system contg.  
 titanocenes and amino acid diester or diamide for lithog. plate)

IT 29570-58-9, Dipentaerythritol hexaacrylate 32435-46-4 56361-55-8,  
 Bisphenol A diethylene glycol diacrylate 77001-81-1  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (photopolymerizable compn. having initiator system contg.  
 titanocenes and amino acid diester or diamide for lithog. plate)

IT 62-53-3, Benzenamine, reactions 96-33-3, Methyl acrylate 105-36-2,  
 Ethyl bromoacetate 1137-73-1  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (photopolymerizable compn. having initiator system contg.  
 titanocenes and amino acid diester or diamide from)

L2 ANSWER 3 OF 12 CA COPYRIGHT 2003 ACS  
 AN 131:52065 CA  
 TI Heat development recording material useful for printing platemaking  
 IN Yamada, Kozaburo; Suzuki, Hiroyuki; Ezoe, Toshihide  
 PA Fuji Photo Film Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 32 pp.  
 CODEN: JKXXAF

DT Patent  
 LA Japanese  
 IC ICM G03C001-498  
 CC 74-7 (Radiation Chemistry, Photochemistry, and Photographic and Other  
     Reprographic Processes)

FAN.CNT 1

|      | PATENT NO.       | KIND | DATE     | APPLICATION NO. | DATE     |
|------|------------------|------|----------|-----------------|----------|
| PI   | JP 11149136      | A2   | 19990602 | JP 1997-332388  | 19971117 |
|      | US 6177240       | B1   | 20010123 | US 1998-193241  | 19981117 |
| PRAI | JP 1997-332388   | A    | 19971117 |                 |          |
| OS   | MARPAT 131:52065 |      |          |                 |          |

AB The title material, possessing .gtoreq.1 image-forming layer, contains an org. Ag salt, a reducing agent, and a compd. [ZCR<sub>1</sub>R<sub>2</sub>(CO)<sub>n</sub>CO<sub>2</sub>]mM (Z = arom., heterocyclic group, amino; M = H, Ag, alkali metal, alk. earth metal; m = 1 or 2; n = 0 or 1; R<sub>1</sub>, R<sub>2</sub> = H or substituent, R<sub>1</sub> and R<sub>2</sub> may link to Z to form a ring structure). The material shows high Dmax, sensitivity, and contrast and the photog. properties are independent of the variation of development conditions.

ST heat developable photosensitive material; photothermog  
 material carboxylic acid nucleating agent

IT Photothermographic copying  
 (photothermog. copying material contg. org. silver salt,  
 reducing agent, and carboxylic acid compd. as nucleating agent)

IT 114-76-1 1137-73-1 1989-33-9, 9H-Fluorene-9-carboxylic acid  
 207454-15-7 227186-71-2 227186-72-3 227186-73-4 227186-74-5  
 227186-75-6 227186-76-7 227187-56-6 227187-57-7 227187-58-8  
 227187-59-9  
 RL: DEV (Device component use); USES (Uses)  
 (photothermog. copying material contg. org. silver salt,  
 reducing agent, and carboxylic acid compd. as nucleating agent)

IT 705-61-3P 10502-44-0P 21607-78-3P 158502-03-5P 207454-26-0P  
 227186-69-8P 227186-70-1P  
 RL: DEV (Device component use); PNU (Preparation, unclassified); PREP  
 (Preparation); USES (Uses)  
 (photothermog. copying material contg. org. silver salt,  
 reducing agent, and carboxylic acid compd. as nucleating agent)

IT 66791-63-7P 151453-12-2P 151453-14-4P  
 RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation);  
 RACT (Reactant or reagent)  
 (prepn. of carboxylic acid compd. nucleating agent)

IT 91-66-7, N,N-Diethylaniline 122-39-4, Diphenylamine, reactions  
 603-34-9, N,N-Diphenylaniline 4755-77-5, Ethyl chloroglyoxylate  
 5279-59-4, 4-tert-Butyl-N-methylaniline

RL: RCT (Reactant); RACT (Reactant or reagent)  
(prepn. of carboxylic acid compd. nucleating agent)

IT 62-53-3, Benzenamine, reactions 5445-17-0, Methyl 2-bromopropionate

RL: RCT (Reactant); RACT (Reactant or reagent)  
(prepn. of phenylalanine Me ester)

L2 ANSWER 4 OF 12 CA COPYRIGHT 2003 ACS  
AN 129:321109 CA

TI Photoactivated dentin bonding with N-phenyliminodiacetic acid

AU Code, James E.; Antonucci, Joseph M.; Bennett, Patricia S.; Schumacher, Gary E.

CS Clinical Center, National Institutes of Health, Gaithersburg, MD, USA

SO Dental Materials (1997), 13(4), 252-257

CODEN: DEMAEP; ISSN: 0109-5641

PB Academy of Dental Materials

DT Journal

LA English

CC 63-7 (Pharmaceuticals)

AB The overall objective of this study was to correlate adhesive resin and polymn. initiator chem. with bonding to dentin that had been treated with N-phenyliminodiacetic acid (PIDAA), a self-etching primer with initiator and co-initiator potential. The hypotheses to be tested were that: (1) the nature of the adhesive resin and (2) the type of polymn. initiator system are crit. factors that can influence the bonding of composite restoratives to dentin. Three types of bonding resins: (A) a non-carboxylic acid bonding resin (BisGMA/HEMA); (B) a carboxylic acid monomer (PMDM, the control); and (C) a combination system (BisGMA/HEMA/PMDM), along with two types of initiator systems: (1) a self-curing chem. initiator system based on PIDAA and (2) a dual-cure system involving camphorquinone, PIDAA, and visible light irradn., were tested with a randomized 3 .times. 2 full factorial design. Mean shear bond strengths and std. deviations were obtained (with and without camphorquinone, resp.): (A), 11.0 MPa .+- . 3.9 and 4.1 MPa .+- . 4.9; (B), 27.0 MPa .+- . 5.3 and 13.7 MPa .+- . 5.6; (C), 18.3 MPa .+- . 5.3 and 7.0 MPa .+- . 5.2. The use of camphorquinone significantly enhanced the mean shear bond strengths obtained with the carboxylic, non-carboxylic and combination monomer based adhesive systems ( $p < 0.0001$ ). For PIDAA-treated dentin, moderate shear bond strengths were obtained with a non-carboxylic acid resin soln. contg. camphorquinone. The addn. of both PMDM and camphorquinone to this resin further improved the shear bond strengths. The highest mean shear bond strength was obtained with the combination of PMDM and camphorquinone ( $p < 0.05$ ). These results suggest that formulations based on PIDAA, PMDM and camphorquinone are more effective as bonding systems than those formulations without PMDM and camphorquinone. PIDAA, a self-etching primer with initiator and co-initiator abilities, appears to interact pos. with both carboxylic acid monomers such as PMDM and the photooxidant camphorquinone.

ST photoactivated dentin bonding phenyliminodiacetic acid

IT Dental materials and appliances  
(adhesives, dentin; photoactivated dentin bonding with N-phenyliminodiacetic acid)

IT Dental materials and appliances  
(composites; photoactivated dentin bonding with N-phenyliminodiacetic acid)

IT Polymerization  
(photopolymn.; photoactivated dentin bonding with N-phenyliminodiacetic acid)

IT 10373-78-1, Camphorquinone  
RL: CAT (Catalyst use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(photoactivated dentin bonding with N-phenyliminodiacetic acid)

IT 868-77-9, 2-Hydroxyethyl methacrylate 1137-73-1,  
N-Phenyliminodiacetic acid 1565-94-2, Bis-GMA 83418-60-4, Pmdm  
RL: PRP (Properties); RCT (Reactant); THU (Therapeutic use); BIOL

(Biological study); RACT (Reactant or reagent); USES (Uses)  
(photoactivated dentin bonding with N-phenyliminodiacetic  
acid)

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L2 ANSWER 5 OF 12 CA COPYRIGHT 2003 ACS

AN 129:296182 CA

TI Material for lithographic plate preparation having photopolymerizable imaging layer overcoated with oxygen barrier layer

IN West, Paul Richard; Gurney, Jeffery Allen

PA Kodak Polychrome Graphics, USA

SO U.S., 17 pp.

CODEN: USXXAM

DT Patent

LA English

IC ICM G03F007-11

NCL 430276100

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

|    | PATENT NO. | KIND | DATE     | APPLICATION NO. | DATE     |
|----|------------|------|----------|-----------------|----------|
| PI | US 5821030 | A    | 19981013 | US 1996-615916  | 19960314 |
|    | US 5888700 | A    | 19990330 | US 1998-5859    | 19980112 |

PRAI US 1996-615916 19960314

OS MARPAT 129:296182

AB A material for lithog. plate prepns. adapted to be imagewise-exposed with a UV- or visible-light-emitting laser such as an argon-ion or frequency-doubled Nd:YAG laser, comprises a radiation-sensitive layer and an oxygen barrier layer. The radiation-sensitive layer includes one or more addn.-polymerizable ethylenically-unsatd. compds. and a photopolymer. initiator system comprised of a spectral sensitizer that sensitizes in the UV or visible regions of the spectrum and an

N-aryl, O-aryl or S-aryl polycarboxylic acid coinitiator. The oxygen barrier layer comprises fully hydrolyzed polyvinyl alc. and a basic compd. is incorporated in the oxygen barrier layer or the radiation-sensitive layer or both in an amt. sufficient to control thermal fog susceptibility of the material. Such a material is able to effectively meet the requirements of very high photospeed, freedom from thermal fog, and very good shelf life.

ST photopolymerizable material lithog plate oxygen barrier  
IT Lithographic plates  
    (photopolymerizable materials with oxygen barrier layers for prepn. of)  
IT Photoimaging materials  
    (photopolymerizable; with oxygen barrier layers for prepn. of lithog. plates)  
IT Polyvinyl acetals  
RL: TEM (Technical or engineered material use); USES (Uses)  
    (with oxygen barrier layers for prepn. of lithog. plates)  
IT 115-77-5, Pentaerythritol, uses 147-14-8, Copper phthalocyanine  
1137-73-1, Anilinediacetic acid 28961-43-5, Sartomer 9008  
32435-46-4, Kayamer PM-2 37610-75-6 58109-40-3, Diphenyliodonium  
hexafluorophosphate 63226-13-1, 3,3'-Carbonylbis(7-diethylaminocoumarin)  
125051-32-3, CGI-784  
RL: TEM (Technical or engineered material use); USES (Uses)  
    (photopolymerizable compns. for lithog. plate prepns. contg.)  
IT 75-59-2, Tetramethylammonium hydroxide 77-98-5, Tetraethylammonium  
hydroxide 127-09-3, Sodium acetate 137-40-6, Sodium propionate  
141-95-7, Disodium malonate 142-72-3, Magnesium acetate 150-90-3,  
Disodium succinate 327-62-8, Potassium propionate 515-74-2, Sodium  
sulfanilate 526-94-3, Monosodium tartrate, uses 540-72-7, Sodium  
thiocyanate 553-54-8, Lithium benzoate 919-16-4, Lithium citrate  
996-30-5, Sodium isobutyrate 1305-62-0, Calcium hydroxide, uses  
1309-42-8, Magnesium hydroxide 1310-58-3, Potassium hydroxide, uses  
1310-65-2, Lithium hydroxide 1310-73-2, Sodium hydroxide, uses  
1336-21-6, Ammonium hydroxide 2053-21-6, Sodium gallate 2922-55-6,  
Monosodium malonate 3012-65-5, Dibasic ammonium citrate 6531-45-9,  
Lithium propionate 7487-88-9, Magnesium sulfate, uses 7558-79-4,  
Dibasic sodium phosphate 7558-80-7, Monobasic sodium phosphate  
7601-54-9, Tribasic sodium phosphate 7631-99-4, Sodium nitrate, uses  
7758-09-0, Potassium nitrite 7778-49-6, Potassium citrate 7778-77-0,  
Monobasic potassium phosphate 9002-89-5, Mowiol 4-98 14047-56-4  
16987-03-4, Sodium 3-chloropropionate 17013-01-3, Disodium fumarate  
18996-35-5, Monosodium citrate 23311-84-4, Sodium adipate 24634-61-5,  
Potassium sorbate 32224-61-6, Sodium glutarate 50597-61-0, Sodium  
3,4,5-trimethoxybenzoate 109334-81-8, Methyltriethylammonium hydroxide  
RL: TEM (Technical or engineered material use); USES (Uses)  
    (presensitized lithog. plates with photopolymerizable compns.  
    and oxygen barrier layers contg.)

RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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- (18) Mibuka; JP 743905 1995
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L2 ANSWER 6 OF 12 CA COPYRIGHT 2003 ACS  
 AN 129:60589 CA  
 TI **Photosensitive** element having integral thermally bleachable mask  
 and method of use  
 IN West, Paul Richard; Gurney, Jeffery Allen  
 PA Eastman Kodak Co., USA  
 SO U.S., 6 pp.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 IC ICM G03F007-095  
 ICS G03F007-30; G03F007-34; G03F007-38  
 NCL 430278100  
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)  
 FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | US 5759742     | A    | 19980602 | US 1996-719607  | 19960925 |
| PRAI | US 1996-719607 |      | 19960925 |                 |          |

AB A masking element is prep'd. with a **photosensitive** layer on a suitable support, overcoated with a masking layer contg. an IR-absorbing compd. and a thermally bleachable dye. The dye is bleached by imagewise laser irradn., followed by floodwise exposure to produce an image in the **photosensitive** layer corresponding to the laser produced image. The outermost layers are removed and development provides a suitable neg.-working printing plate.

ST **photoimaging** material bleachable mask lithog plate  
 IT Polyethers, uses  
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
 (di-Me siloxane-, Byk 307; **photoimaging** elements having integral thermally bleachable masks for lithog. plate manuf. contg.)  
 IT Polysiloxanes, uses  
 Polysiloxanes, uses  
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
 (di-Me, polyether-, Byk 307; **photoimaging** elements having integral thermally bleachable masks for lithog. plate manuf. contg.)  
 IT **Photoimaging** materials  
 (having integral thermally bleachable masks for manuf. of lithog. plates)  
 IT Lithographic plates  
 (**photosensitive** elements having integral thermally bleachable masks for manuf. of)  
 IT Polyvinyl acetals  
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
 (ternary; **photoimaging** elements having integral thermally bleachable masks for lithog. plate manuf. contg.)

IT 28961-43-5, SR 9008  
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
(SR 9008; **photoimaging** elements having integral thermally bleachable masks for lithog. plate manuf. contg.)  
IT 147-14-8, Copper phthalocyanine 577-11-7, Aerosol OT 1137-73-1  
, Anilinediacetic acid 1497-49-0, Glutaconaldehyde dianil chloride 3524-68-3, Pentaerythritol triacrylate 9002-89-5, Mowiol 4-98 9004-64-2, Hydroxypropylcellulose 32435-46-4, Kayamer PM-2 57534-41-5, Zonyl FSN 63226-13-1, 3,3'-Carbonylbis(7-diethylaminocoumarin) 134127-48-3  
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
(**photoimaging** elements having integral thermally bleachable masks for lithog. plate manuf. contg.)

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L2 ANSWER 7 OF 12 CA COPYRIGHT 2003 ACS

AN 129:10571 CA

TI Silver halide **photographic** emulsion layer having enhanced sensitivity

IN Farid, Samir Y.; Lenhard, Jerome R.; Chen, Chin H.; Muenter, Annabel A.; Gould, Ian R.; Godleski, Stephen A.; Zielinski, Paul A.; Weidner, Charles H.

PA Eastman Kodak Co., USA

SO U.S., 47 pp., Cont.-in-part of U.S. Ser. No. 592,106, abandoned.  
CODEN: USXXAM

DT Patent

LA English

IC ICM G03C001-08

NCL 430583000

CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 2

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | US 5747236     | A    | 19980505 | US 1996-740536  | 19961030 |
|      | EP 786691      | A1   | 19970730 | EP 1997-200126  | 19970116 |
|      | R: DE, FR, GB  |      |          |                 |          |
|      | CN 1168986     | A    | 19971231 | CN 1997-102975  | 19970125 |
|      | CN 1088853     | B    | 20020807 |                 |          |
|      | JP 09211774    | A2   | 19970815 | JP 1997-12986   | 19970127 |
| PRAI | US 1996-592106 | B2   | 19960126 |                 |          |
|      | US 1996-740536 | A    | 19961030 |                 |          |

OS MARPAT 129:10571

AB A **photog.** element comprises a support and at least one silver halide emulsion layer in which the silver halide is sensitized with a fragmentable electron donor of the formula XY, wherein X is an electron donor moiety and Y is a leaving group other than hydrogen, and wherein XY has an oxidn. potential between 0 and about 1.4 V and the oxidized form of XY undergoes a bond cleavage reaction to give the radical X. and the leaving fragment Y. In a preferred embodiment of the invention, the radical X. has an oxidn. potential  $\text{ltoreq.} -0.7\text{V}$ .

ST **photog** emulsion fragmentable electron donor sensitizer

IT **Photographic** emulsions

(contg. fragmentable electron donor compds. for improved photosensitivity)

IT   **Photographic sensitizers**  
      (fragmentable electron donor compds. as)

IT   90-64-2   705-61-3 **1137-73-1**   10502-44-0   13443-54-4  
   17078-28-3   54229-53-7   103678-25-7   207452-94-6   207454-13-5  
   207454-26-0   207454-27-1   207454-28-2   207454-29-3   207454-30-6  
   207454-31-7   207454-32-8   207454-33-9   207454-34-0   207454-35-1  
   207454-36-2   207454-37-3   207454-38-4  
   RL: TEM (Technical or engineered material use); USES (Uses)  
      (fragmentable electron donor sensitizer for silver halide  
      photog. materials)

IT   16955-01-4P   16955-04-7P   21911-68-2P   50845-77-7P   54860-84-3P  
   58665-00-2P   72228-40-1P   132631-08-4P   151453-14-4P   151453-19-9P  
   155171-53-2P   183374-82-5P   207454-05-5P   207454-06-6P   207454-07-7P  
   207454-08-8P   207454-09-9P   207454-10-2P   207454-11-3P   207454-12-4P  
   RL: RCT (Reactant); SPN (Synthetic preparation); TEM (Technical or  
      engineered material use); PREP (Preparation); RACT (Reactant or reagent);  
      USES (Uses)  
      (prepn. and reaction in prepg. fragmentable electron donor sensitizers  
      for silver halide photog. materials)

IT   207454-04-4P  
   RL: SPN (Synthetic preparation); TEM (Technical or engineered material  
      use); PREP (Preparation); USES (Uses)  
      (prepn. and reaction in prepg. fragmentable electron donor sensitizers  
      for silver halide photog. materials)

IT   28444-51-1P   30042-67-2P   72228-39-8P   91957-24-3P   92964-75-5P  
   207454-14-6P   207454-15-7P   207454-16-8P   207454-17-9P   207454-18-0P  
   207454-19-1P   207454-20-4P   207454-21-5P   207454-22-6P   207454-23-7P  
   207454-24-8P   207454-25-9P  
   RL: SPN (Synthetic preparation); TEM (Technical or engineered material  
      use); PREP (Preparation); USES (Uses)  
      (prepn. and use as fragmentable electron donor sensitizer for silver  
      halide photog. materials)

IT   94-09-7P, Ethyl 4-aminobenzoate  
   RL: RCT (Reactant); SPN (Synthetic preparation); TEM (Technical or  
      engineered material use); PREP (Preparation); RACT (Reactant or reagent);  
      USES (Uses)  
      (reaction in prepg. fragmentable electron donor sensitizers for silver  
      halide photog. materials)

IT   62-53-3, Benzenamine, reactions   92-84-2, 10H-Phenothiazine   104-94-9,  
   p-Anisidine   105-36-2, Ethyl bromoacetate   106-49-0, p-Toluidine,  
   reactions   120-12-7, Anthracene, reactions   120-75-2,  
   2-Methylbenzothiazole   122-39-4, Diphenylamine, reactions   350-96-9  
   535-11-5, Ethyl 2-bromopropionate   586-77-6, p-Bromo-N,N-dimethylaniline  
   1912-48-7, 1-Methyl-3-indoleacetic acid   3119-93-5, N-Ethyl-2-  
   methylbenzothiazolium iodide   64035-64-9, Trimethylsilylmethyl triflate  
   64501-34-4  
   RL: RCT (Reactant); TEM (Technical or engineered material use); RACT  
      (Reactant or reagent); USES (Uses)  
      (reaction in prepg. fragmentable electron donor sensitizers for silver  
      halide photog. materials)

RE.CNT   34   THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD

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- (31) Shiba; US 3615632 1971
- (32) Toya; US 5190855 1993 CA
- (33) Trivelli; US 2419975 1947 CA
- (34) Ulbing; US 3809561 1974 CA

L2 ANSWER 8 OF 12 CA COPYRIGHT 2003 ACS  
 AN 127:301283 CA  
 TI Peel-developable lithographic printing plate  
 IN West, Paul Richard; Gurney, Jeffery Allen  
 PA Eastman Kodak Company, USA  
 SO Eur. Pat. Appl., 25 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 IC ICM G03F007-34  
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 FAN.CNT 1

|      | PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE     |
|------|--|------|----------|-----------------|----------|
| PI   | EP 795790  | A2   | 19970917 | EP 1997-200570  | 19970227 |
|      | EP 795790  | A3   | 19980819 |                 |          |
|      | EP 795790  | B1   | 20020925 |                 |          |
|      | R: DE, FR, GB  |      |          |                 |          |
|      | US 5776655   | A    | 19980707 | US 1996-613931  | 19960311 |
|      | JP 10003166  | A2   | 19980106 | JP 1997-55252   | 19970310 |
| PRAI | US 1996-613931   | A    | 19960311 |                 |          |
| AB   | A peel-developable lithog. printing plate is comprised of a substrate, a hydrophilic layer comprising a polymeric acid overlying the substrate, a radiation-sensitive image-forming layer overlying the hydrophilic layer and a stripping layer that is strippably adhered to the image-forming layer. The image-forming layer is comprises of a photopolymerizable compn. comprising a polymeric binder, a plurality of addn.-polymerizable ethylenically-unsatd. compds. at least one of which possesses phosphorus-derived acidic functionality and a photopolymn. initiator. After imagewise exposure of the plate to activating radiation, the stripping layer is peeled from the image-forming layer with only the unexposed regions of the image-forming layer adhering thereto so as to reveal the underlying hydrophilic layer and thereby form a lithog. printing surface. |      |          |                 |          |
| ST   | peel developable lithog plate photopolymerizable compn   |      |          |                 |          |
| IT   | Polyethers, uses   |      |          |                 |          |
|      | RL: TEM (Technical or engineered material use); USES (Uses)<br>(di-Me siloxane-, BYK 307; lithog. plate prepns. using peel-developable photosensitive compns. contg.)  |      |          |                 |          |
| IT   | Polysiloxanes, uses  |      |          |                 |          |

Polysiloxanes, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
     (di-Me, polyether-, BYK 307; lithog. plate prepn. using  
     peel-developable photosensitive compns. contg.)  
 IT Lithographic plates  
     (peel-developable photosensitive compns. contg. ethylenically  
     unsatd. compds. with phosphorus-derived acidic functionality for manuf.  
     of)  
 IT Photoimaging materials  
     (photpolymerizable; contg. ethylenically unsatd. compds.  
     with phosphorus-derived acidic functionality for lithog. plate prepn.)  
 IT 28961-43-5, SR 9008  
     RL: TEM (Technical or engineered material use); USES (Uses)  
         (SR 9008; lithog. plate prepn. using peel-developable  
         photosensitive compns. contg.)  
 IT 96-66-2 147-14-8, Copper phthalocyanine 1137-73-1,  
     Anilinediacetic acid 3524-68-3, Pentaerythritol triacrylate  
     32435-46-4, Bis(2-methacryloyloxyethyl) hydrogen phosphate 58109-40-3,  
     Diphenyliodonium hexafluorophosphate 63123-42-2 63226-13-1,  
     3,3'-Carbonylbis(7-diethylaminocoumarin) 125051-32-3, CGI-784  
     RL: TEM (Technical or engineered material use); USES (Uses)  
         (lithog. plate prepn. using peel-developable photosensitive  
         compns. contg.)

L2 ANSWER 9 OF 12 CA COPYRIGHT 2003 ACS  
 AN 125:288838 CA  
 TI Sensitized photopolymerizable compositions for manufacture of  
     lithographic plates  
 IN West, Paul Richard; Gurney, Jeffery Allen  
 PA Eastman Kodak Company, USA  
 SO Eur. Pat. Appl., 29 pp.  
     CODEN: EPXXDW  
 DT Patent  
 LA English  
 IC ICM G03F007-031  
     ICS C08F002-50  
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other  
     Reproductive Processes)  
 FAN.CNT 1

|      | PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|------|---|------|----------|-----------------|----------|
| PI   | EP 730201   | A1   | 19960904 | EP 1996-200485  | 19960226 |
|      | EP 730201   | B1   | 20010509 |                 |          |
|      | R: BE, DE, FR, GB, IT, NL   |      |          |                 |          |
|      | US 5629354  | A    | 19970513 | US 1995-395352  | 19950228 |
|      | JP 08254821   | A2   | 19961001 | JP 1996-41630   | 19960228 |
|      | US 5942372  | A    | 19990824 | US 1996-752342  | 19961119 |
|      | US 5914215  | A    | 19990622 | US 1997-911288  | 19970814 |
| PRAI | US 1995-395352  | A    | 19950228 |                 |          |
|      | US 1996-752342  | A3   | 19961119 |                 |          |
| OS   | MARPAT 125:288838   |      |          |                 |          |
| AB   | Improved photopolymer initiator systems are comprised of a spectral sensitizer that sensitizes in the UV or visible regions of the spectrum and an N-aryl, O-aryl, or S-aryl polycarboxylic acid coinitiator. The improved initiator systems are incorporated in photopolymerizable compns. contg. one or more addn.-polymerizable ethylenically unsatd. compds. to form compns. suitable for the prepn. of radiation-sensitive layers in manuf. of lithog. plates adapted to be imagewise exposed with UV- or visible-light-emitting lasers such as argon-ion lasers and frequency doubled Nd:YAG lasers. Such plates are able to effectively meet the dual requirements of very high photospeed and very good shelf life required in computer-to-plate systems. |      |          |                 |          |
| ST   | sensitized photopolymerizable compn manuf lithog plate  |      |          |                 |          |
| IT   | Lithographic plates   |      |          |                 |          |

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FILE COVERS 1907 - 24 Apr 2003 VOL 138 ISS 18  
FILE LAST UPDATED: 24 Apr 2003 (20030424/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 9004-38-0/rn and acid adj (number or value)

MISSING OPERATOR 'ADJ (NUMBER'

The search profile that was entered contains terms or nested terms that are not separated by a logical operator.

=> s 9004-38-0/rn and acid (w) (number or value)

1470 9004-38-0

10 9004-38-0D

1461 9004-38-0/RN

(9004-38-0 (NOTL) 9004-38-0D )

3576996 ACID

87045 NUMBER

733961 VALUE

11912 ACID (W) (NUMBER OR VALUE)

L1 9 9004-38-0/RN AND ACID (W) (NUMBER OR VALUE)

=> d all 1-9

L1 ANSWER 1 OF 9 CA COPYRIGHT 2003 ACS

AN 137:286436 CA

TI Light-sensitive resin composition for dry resist film developable with visible light and resistant towards sand blasting and method for cutting patterned material applied with the same according to sand blasting

IN Ueda, Shoji

PA Mitsubishi Rayon Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 15 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03F007-029

ICS C08F002-44; C08F002-50; C08F283-00; C08F290-00; C08F299-06;  
C08K005-00; C08K005-55; C08L075-14; C08L101-00; G03F007-004;  
G03F007-027; G03F007-031; G03F007-032; G03F007-40

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

| PATENT NO.         | KIND | DATE     | APPLICATION NO. | DATE     |
|--------------------|------|----------|-----------------|----------|
| -----              | ---- | -----    | -----           | -----    |
| PI JP 2002287349   | A2   | 20021003 | JP 2001-87807   | 20010326 |
| PRAI JP 2001-87807 |      | 20010326 |                 |          |

OS MARPAT 137:286436

AB The title compn. contains a photopolymerizable urethane (meth)acrylate having .gtoreq.2 (meth)acryloyl groups, an alkali solubilizable resin of 50-250 mg/KOH **acid value**, a borate compd., and a sensitizer dye, wherein the borate compd. has structure (R1) (R2) (R3) (R4) B-.cntdot.Z ( R1-4 = alkyl, alkenyl, aryl, etc.; Z = quaternary ammonium, quaternary pyridinium, quaternary quinolinium). The compn. provides photoresist is directly patterned with a laser beam and shows the good resistance towards sand blasting to cut a patterned mother substrate with sand blasting.

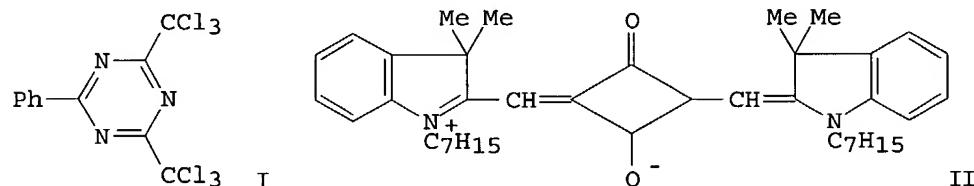
ST light sensitive resin compn dry resist film sand blasting

IT Light-sensitive materials  
Photoresists

PA Fuji Photo Film Co., Ltd., Japan  
 SO Ger. Offen., 35 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 IC ICM G03F007-004  
 ICS C08F002-50  
 ICA C09B023-00; C09B015-00; C09B057-02  
 CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

|      | PATENT NO.        | KIND | DATE     | APPLICATION NO. | DATE     |
|------|-------------------|------|----------|-----------------|----------|
| PI   | DE 3926666        | A1   | 19900215 | DE 1989-3926666 | 19890811 |
|      | DE 3926666        | C2   | 19980604 |                 |          |
|      | JP 02048665       | A2   | 19900219 | JP 1988-200606  | 19880811 |
|      | JP 08020734       | B4   | 19960304 |                 |          |
|      | US 4997745        | A    | 19910305 | US 1989-394383  | 19890811 |
| PRAI | JP 1988-200606    |      | 19880811 |                 |          |
| OS   | MARPAT 113:123869 |      |          |                 |          |
| GI   |                   |      |          |                 |          |



AB Light-sensitive compns. contg. a trihalomethyl-s-triazine and a dye **photosensitizer** having a redn. potential that is not more than 0.10 V higher than the redn. potential of the trihalomethyl-s-triazine are used in **photopolymerizable photoimaging** compns. for the prodn. of lithog. plates, printing plates, resist patterns, **photomasks**, or the like. The compns. are sensitive in the visible and near-IR regions and are stable. Thus, a PET support was overcoated with a compn. contg. pentaerythritol tetraacrylate, a benzyl acrylate-methacrylic acid copolymer, I, II (**photosensitizer**), CH<sub>2</sub>Cl<sub>2</sub>, and MeCOEt, dried, imagewise exposed through a step tablet, and developed to show 6 steps.

ST light sensitive compn **photopolymer photoimaging**; trihalomethyltriazine light sensitive compn **photoimaging**; dye light sensitive compn **photoimaging**; cyanine dye light sensitive **photoimaging**; triazine trihalomethyl light sensitive **photoimaging**

IT **Lithographic plates**  
**Photomasks**  
**Printing plates**  
 (photopolymerizable compns. for fabrication of,  
 photoinitiator compns. for)

IT **Resists**  
 (photo-, photoinitiator compns. contg. cyanine dye  
 and trihalomethyltriazine compd. for)

IT **Photoimaging compositions and processes**  
 (photopolymerizable, photoinitiator compns. contg.  
 cyanine dye and trihalomethyltriazine compd. for)

IT 24504-22-1 125775-49-7 129300-92-1  
 RL: USES (Uses)  
 (photoinitiator compns. contg. dye sensitizer and, for  
 photopolymer **photoimaging** compns.)

IT 905-96-4 985-10-4 14806-50-9 41387-42-2 61877-50-7 129281-02-3

RL: USES (Uses)  
(photoinitiator compns. contg. trihalomethyltriazine and, for  
photopolymer photoimaging compns.)

L48 ANSWER 70 OF 78 CA COPYRIGHT 2003 ACS  
AN 111:244054 CA  
TI Fourier transform infrared (FTIR) kinetics diagnostics of thin film polymerization photoinitiated by excimer laser pulses  
AU Klick, David; Akerman, M. Alfred; Paul, George L.; Supurovic, Darko; Tsuda, Haruki  
CS Lincoln Lab., Massachusetts Inst. Technol., Lexington, MA, 02173-0073, USA  
SO Proceedings of SPIE-The International Society for Optical Engineering (1989), 1056(Photochem. Thin Films), 56-63  
CODEN: PSISDG; ISSN: 0277-786X  
DT Journal  
LA English  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 36  
AB Rapid-scan non-repetitive FTIR was used for the 1st time to monitor the kinetics of polymn., specifically excimer-laser-induced curing of thin films. IR scans with 4 cm<sup>-1</sup> spectral resoln. were recorded at a 12.5 Hz rate. These spectra are of high-quality (noise-free, reproducible), so that during in situ curing, unchanging features of the spectra overlay from scan to scan. This allows one to confidently assume that the absorbance at the peak of interest reflects the extent of polymn. It was found in the FTIR expts. that a significant fraction of the reactions occur within 100 ms of the light input, with another significant fraction occurring on a time scale of seconds afterwards. More information could thus be obtained from improved FTIR instruments with scan periods <80 ms and memories capable of holding >25 scans. The app. which was used combining high-power UV light from an excimer laser (to provide initiation for polymn.) with reaction monitoring via rapid-scan FTIR, is likely to be useful in other studies.  
ST IR diagnostic photopolymn kinetics lithog  
IT Lithography  
(Fourier-transform IR kinetic diagnostic of thin film polymn. photoinitiated by excimer laser pulses in relation to)  
IT Kinetics of polymerization  
(photoinitiated by excimer laser pulses, of thin films, Fourier-transform IR diagnostic of)  
IT Infrared spectrometry  
(Fourier-transform, in kinetic diagnostic of thin film polymn. photoinitiated by excimer laser pulses, for microlithog. publications)  
IT Coating materials  
(UV-curable, Fourier-transform IR kinetic diagnostic in relation to)  
IT Resists  
(photo-, Fourier-transform IR kinetic diagnostics of thin film polymn. photoinitiated by excimer laser pulses in relation to)  
IT 105-59-9, N-Methyldiethanolamine 2128-93-0, Trigonal 12 13048-33-4  
13463-67-7, Titanium dioxide, uses and miscellaneous 15625-89-5  
24650-42-8, Irgacure 651 82799-44-8, 2,4-Diethylthioxanthone  
RL: USES (Uses)  
(photopolymn. of thin film compn. contg., initiated by excimer laser pulses, Fourier-transform IR kinetic diagnostic of)

L48 ANSWER 71 OF 78 CA COPYRIGHT 2003 ACS  
AN 110:145036 CA  
TI Printing plate materials having photopolymerization initiator composition containing polymethine-type dyes and photopolymerizable composition

IN Fukui, Tetsuro; Arahara, Kozo; Fukumoto, Hiroshi; Oguchi, Yoshihiro  
 PA Canon K. K., Japan  
 SO Jpn. Kokai Tokkyo Koho, 7 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM G03C001-68  
 ICS C08F002-50  
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 FAN.CNT 1

|      | PATENT NO.        | KIND | DATE     | APPLICATION NO. | DATE     |
|------|-------------------|------|----------|-----------------|----------|
| PI   | JP 63208036       | A2   | 19880829 | JP 1987-40413   | 19870225 |
| PRAI | JP 1987-40413     |      | 19870225 |                 |          |
| OS   | MARPAT 110:145036 |      |          |                 |          |

AB Printing plate materials contain a **photopolymer**. initiator compn. contg. polymethine-type dyes of the formula RR<sub>1</sub>C+(CH:CR<sub>2</sub>)<sub>m</sub>(CH:CH)nCH:CR<sub>3</sub>R<sub>4</sub>.X- [I; R, R<sub>1</sub>-4 = H, (substituted) alkyl, cycloalkyl, alkenyl, (substituted) aralkyl, (substituted) aryl, (substituted) styryl, (substituted) heterocycl; X- = anion; m = 0, 1; n = 0, 1, 2] and a **photopolymer**. **photosensitive** component as the main constituents. The materials are capable of making printing plates by using a compact and simple plate making app. using IR or semiconductor laser beams. Thus, a polyimide film was coated with a compn. contg. trimethylolpropane triacrylate, poly(Me methacrylate), I (R, R<sub>1</sub>-R<sub>4</sub> = Et<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>-p; X- = ClO<sub>4</sub>-; m = 0; n = 1), and benzoyl peroxide and then coated with poly(vinyl alc.) to give a **photosensitive** plate showing high sensitivity toward a semiconductor laser beam (830 nm).  
 ST printing plate material **photopolymer** initiator; polymethine dye printing plate material  
 IT Lithographic plates  
     (**photopolymer**. initiators contg. polymethine dyes for)  
 IT 15625-89-5 73214-79-6  
 RL: USES (Uses)  
     (**photopolymerizable** **photosensitive** compn., lithog. plates contg.)  
 IT 34330-11-5 91307-97-0 91308-01-9 91320-04-6 119141-83-2  
 119760-01-9 119760-03-1 119781-64-5 119781-66-7  
 RL: USES (Uses)  
     (**photosensitizer**, **photosensitive** lithog. plates contg.)  
 IT 94-36-0, Benzoyl peroxide, uses and miscellaneous 3006-86-8,  
 1,1-Bis(tert-butylperoxy)cyclohexane 11118-65-3, Methylcyclohexanone peroxide 12262-58-7, Cyclohexanone peroxide 33943-20-3,  
 Di-tert-butylidiperoxy isophthalate  
 RL: USES (Uses)  
     (**polymer**. initiator, **photosensitive** lithog. plates contg.)  
 L48 ANSWER 72 OF 78 CA COPYRIGHT 2003 ACS  
 AN 103:203643 CA  
 TI Wear mechanism and ways to increase the durability of **photopolymer** printing plates  
 AU Velichko, E.; Osipova, T.; Zolotukhin, A.; Lazarenko, E. T.  
 CS Kiev, USSR  
 SO Poligrafiya (1985), (9), 22-4  
 CODEN: PLGFAH; ISSN: 0032-2717  
 DT Journal  
 LA Russian  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 36, 38  
 AB The wear of **photopolymer** printing plates is described according to a theory proposed by B. I. Kostetskii (1985) in terms of the sp. work of wear, crystallinity, av. size of globules and aggregates on the

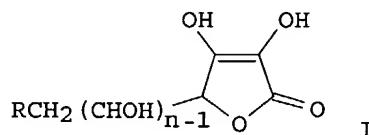
IT (sensitized photopolymerizable compns. for manuf. of)  
 125051-32-3  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (CGI 784; sensitized photopolymerizable compns. for lithog.  
 plate manuf. contg.)  
 IT 32435-46-4, Kayamer PM-2  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (Kayamer PM 2; sensitized photopolymerizable compns. for  
 lithog. plate manuf. contg.)  
 IT 28961-43-5, Sartomer 9008  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (Sartomer 9008; sensitized photopolymerizable compns. for  
 lithog. plate manuf. contg.)  
 IT 147-14-8, Copper phthalocyanine 1137-73-1, Anilinediacetic acid  
 3524-68-3, Pentaerythritol triacrylate 4395-58-8 6359-05-3, Ethyl  
 eosin 6542-67-2, 2,4,6-Tris(trichloromethyl)-s-triazine 7189-82-4  
 24481-46-7 30042-69-4 34100-36-2 58109-40-3, Diphenyliodonium  
 hexafluorophosphate 63123-42-2 63226-13-1, 3,3'-Carbonylbis(7-  
 diethylaminocoumarin) 77831-38-0 116450-61-4 116450-65-8  
 116450-67-0 117522-01-7, Tetramethylammonium butyltriphenylborate  
 125604-88-8, 4-(Octyloxyphenyl)phenyliodonium tosylate 182807-57-4  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (sensitized photopolymerizable compns. for lithog. plate  
 manuf. contg.)

L2 ANSWER 10 OF 12 CA COPYRIGHT 2003 ACS  
 AN 99:131416 CA  
 TI Forming an image with photosensitive cuprous halide material  
 IN Takahashi, Toshiaki; Itoh, Noboru  
 PA Konishiroku Photo Industry Co., Ltd. , Japan  
 SO Eur. Pat. Appl., 54 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 IC G03C001-50; G03C005-24  
 CC 74-11 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)

FAN.CNT 1

|      | PATENT NO.   | KIND                      | DATE   | APPLICATION NO.  | DATE   |
|------|--|---------------------------|--|--|--|
| PI   | EP 82015<br>R: DE, GB<br>JP 58102933<br>JP 58116534<br>JP 58116535<br>US 4427762 | A1<br>A2<br>A2<br>A2<br>A | 19830622<br>19830618<br>19830711<br>19830711<br>19840124 | EP 1982-306674<br>JP 1981-203177<br>JP 1981-203178<br>JP 1981-203179<br>US 1982-450047 | 19821214<br>19811216<br>19811216<br>19811216<br>19821215 |
| PRAI | JP 1981-203177<br>JP 1981-203178<br>JP 1981-203179                               |                           | 19811216<br>19811216<br>19811216                         |  |  |

GI



AB A developer for a photosensitive emulsion contg. Cu(I) halide  
 (alone or in mixt. with Ag halide) comprises .gtoreq.1 compd. selected  
 from .gtoreq.1 of the following groups: (1) .alpha.-amino acids,  
 carboxylic acids, quinoline derivs., pyridine derivs., or amines, (2)  
 4-aminophenols or 3-pyrazolidones, or (3) ascorbic acid derivs. (I; R = H,

OH; n = 1-4). Thus, a PET support was coated with a gelatin-Cu(Br,I) emulsion (32 mg Cu/100 cm<sup>2</sup>), immersed for 30 s at 20.degree. in an aq. developer soln. contg. L-ascorbic acid 0.183, L-glutamine 0.4, and Na metaborate 0.026 mol, imagewise exposed to UV radiation, developed in the above developer for 5 min (25.degree.), and fixed in an aq. soln. contg. Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> 240, Na<sub>2</sub>SO<sub>3</sub> 10, and NaHSO<sub>3</sub> 25 g to give an image with a Dmax, Dmin, and .gamma. of 3.2, 0.03, and 0.95, resp.

**ST** copper halide **photosensitive** emulsion developer; cuprous halide **photog** emulsion developer; amino acid copper halide **photoimaging**; ascorbic acid copper halide **photoimaging**; amine copper halide **photog** development

**IT** **Photographic** emulsions  
 (contg. copper(I) halide)

**IT** **Photoimaging** compositions and processes  
 (copper(I) halide-based emulsions as, developer compn. for)

**IT** Amines, uses and miscellaneous  
 Amino acids, compounds  
 Amino acids, uses and miscellaneous  
 Carboxylic acids, uses and miscellaneous  
 RL: USES (Uses)  
 (developer compn. for **photosensitive** copper(I) halide-based emulsions contg.)

**IT** **Photographic** developers  
 (for copper(I) halide-contg. emulsions)

**IT** Carboxylic acids, uses and miscellaneous  
 RL: USES (Uses)  
 (hydroxy, developer compn. for **photosensitive** copper(I) halide-based emulsions contg.)

**IT** 50-81-7, uses and miscellaneous 55-55-0 56-40-6, uses and  
 miscellaneous 56-45-1, uses and miscellaneous 56-84-8, uses and  
 miscellaneous 56-85-9, uses and miscellaneous 56-86-0, uses and  
 miscellaneous 56-87-1, uses and miscellaneous 61-90-5, uses and  
 miscellaneous 62-57-7 69-72-7, uses and miscellaneous 70-26-8  
 70-47-3, uses and miscellaneous 71-00-1, uses and miscellaneous  
 72-19-5, uses and miscellaneous 73-22-3, uses and miscellaneous  
 74-79-3, uses and miscellaneous 78-90-0 92-43-3 93-62-9 107-15-3,  
 uses and miscellaneous 107-97-1 108-00-9 109-76-2 109-81-9  
 110-72-5 111-39-7 111-41-1 122-87-2 134-03-2 139-13-9  
 141-82-2, uses and miscellaneous 142-73-4 302-72-7 302-84-1  
 498-40-8 499-83-2 505-47-5 516-06-3 598-41-4 621-92-1 657-27-2  
**1137-73-1** 3731-51-9 6245-75-6 7378-23-6 7775-19-1  
 21291-99-6 26239-55-4 27822-92-0 29816-01-1 54646-39-8  
 86848-97-7 86849-27-6 86849-28-7  
 RL: USES (Uses)  
 (developer compn. for **photosensitive** copper halide emulsion  
 contg.)

**IT** 528-88-1  
 RL: USES (Uses)  
 (developer for **photosensitive** copper (I) halide-based  
 emulsion contg.)

**IT** 63-68-3, uses and miscellaneous  
 RL: USES (Uses)  
 (developer for **photosensitive** copper halide emulsion contg.)

**IT** 51-35-4 51-45-6, uses and miscellaneous 52-52-8 54-85-3 70-26-8  
 77-92-9, uses and miscellaneous 84-88-8 85-87-0 86-59-9 89-65-6  
 93-10-7 97-05-2 147-85-3, uses and miscellaneous 150-25-4 305-84-0  
 327-57-1 407-41-0 499-82-1 505-47-5 553-53-7 556-50-3 627-01-0  
 644-42-8 658-79-7 704-15-4 869-19-2 1118-68-9 1121-22-8  
 1436-59-5 1606-01-5 2752-17-2 2756-85-6 3183-21-9 5423-54-1  
 6949-77-5 11000-17-2 16177-21-2 17057-00-0 20759-15-3 25303-14-4  
 63557-68-6 67967-11-7 86849-08-3  
 RL: USES (Uses)  
 (developer for **photosensitive** copper(I) halide-based emulsion  
 contg.)

L2 ANSWER 11 OF 12 CA COPYRIGHT 2003 ACS

AN 84:172199 CA

TI Light-sensitive photographic material

IN Riester, Oskar; Kampfer, Helmut; Hase, Marie; Oehlschlaeger, Hans

PA Agfa-Gevaert A.-G., Fed. Rep. Ger.

SO Ger. Offen., 18 pp.

CODEN: GWXXBX

DT Patent

LA German

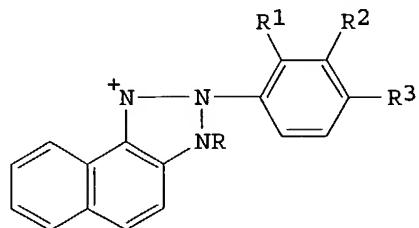
IC G03C

CC 74-8 (Radiation Chemistry, Photochemistry, and Photographic Processes)

FAN.CNT 1

|      | PATENT NO.      | KIND | DATE     | APPLICATION NO. | DATE     |
|------|-----------------|------|----------|-----------------|----------|
| PI   | DE 2433072      | A1   | 19760122 | DE 1974-2433072 | 19740710 |
| PRAI | DE 1974-2433072 |      | 19740710 |                 |          |

GI



I (sic)

AB Silver-free light-sensitive photog. recording materials having high light sensitivity and giving intensely colored images are composed of a support coated with a layer contg. a triazolium salt (I; R = Ph, p-HOC<sub>6</sub>H<sub>4</sub>; R<sub>1</sub> = H, NO<sub>2</sub>, MeO, or R<sub>1</sub>R<sub>2</sub> together form a benzene ring; R<sub>2</sub> = H or R<sub>2</sub>R<sub>1</sub> together form a benzene ring; R<sub>3</sub> = H, Cl, MeO, NO<sub>2</sub>, or a heterocycle nucleus; X<sup>-</sup> = anion), a carboxylic acid, such as phenylglycine, .alpha.-anilinoisobutyric acid, phenylaminodiphenylacetic acid, N-(4-formylphenyl)-N-methylaminoacetic acid, and the like, and a binder. Thus, to a soln. contg. I (R = Ph; R<sub>1</sub>, R<sub>2</sub> = H; R<sub>3</sub> = 5-methyl-2-benzothiazolyl) 0.4 g, MeO 10, and 10% aq. gelatin 30 ml was added a soln. contg. phenylglycine 0.5, MeOH 5, and 10% aq. gelatin 20 ml with stirring. To this soln. was then added 10% poly(vinylpyrrolidone) 10 ml and 7.5% saponin 1.5 ml and the vol. brought up to 100 ml by the addn. of water. A photog. paper was then coated with this soln., dried, and exposed behind a .sqroot.2 step wedge with a 500 W lamp at 10 cm for 3 min to give an intense red image with 15 steps.

ST triazolium salt photog emulsion; silver free photog emulsion

IT Carboxylic acids, uses and miscellaneous

RL: USES (Uses)

(photog. silver-free emulsions contg. triazolium salts and)

IT Photographic emulsions

(silver-free, contg. carboxylic acids and triazolium salts)

IT 1H-Naphtho[1,2-d]triazolium, 2-phenyl-, derivs., salts

RL: USES (Uses)

(photog. silver-free emulsions contg. carboxylic acids and)

IT 56862-95-4 59081-50-4 59081-51-5 59081-53-7 59081-54-8

59081-55-9 59081-56-0 59081-57-1 59081-58-2 59081-59-3

RL: USES (Uses)

(photog. silver-free emulsions contg. carboxylic acids and)

IT 76-93-7, uses and miscellaneous 103-01-5 500-72-1 1137-73-1

1922-78-7 5698-54-4 40643-55-8 59081-60-6 59081-61-7 59081-62-8

RL: USES (Uses)

(photog. silver-free emulsions contg. triazolium salts and)

L2 ANSWER 12 OF 12 CA COPYRIGHT 2003 ACS  
 AN 81:165160 CA  
 TI Photoreduction of dyes catalyzed by organic and biomolecules  
 AU Pal, M. K.; Mazumdar, K. K.  
 CS Fac. Sci., Univ. Kalyani, Kalyani, India  
 SO Histochemistry (1974), 40(3), 267-74  
 CODEN: HCMYAL; ISSN: 0301-5564  
 DT Journal  
 LA English  
 CC 6-13 (General Biochemistry)  
 Section cross-reference(s): 9, 28  
 AB Photoredn. of methylene blue in the presence of various org. and biomols. was studied spectrophotometrically and potentiometrically. During the photoredn., the emf of the system measured against calomel electrode increased and attained a plateau long before the complete redn. of the dye. Thus, the emf developed in this system is not that of the dye-leucodye. The emf was interpreted to be mainly that of dye-dye free radical, although dye-leucodye and dye free radical-leucodye may contribute to the emf value of the system. The free radical may be formed in the system immediately after exposure to light or even in the dark at high pH. Photoredn. of methylene blue in the presence of EDTA was completely inhibited by excess Mg<sup>2+</sup>. By using various compds. to act as electron donors in the photoredn., compds. having the general formula R<sub>1</sub>R<sub>2</sub>NCH<sub>2</sub>COOH caused redn. of methylene blue where R<sub>1</sub> and R<sub>2</sub> were CH<sub>2</sub>COOH, alkyl, or aryl substitution. Photoredn. became faster with >1 CH<sub>2</sub>COOH group in the compds. Glycine or N-methylglycine failed to act as a catalyst; N-phenylglycine or N,N-diethylglycine catalyzed the photoredn. N-Phenyl- or N-ethylaminodiacetic acid caused faster photoredn. of methylene blue. Analgin caused photoredn. even in dark. The dye capri blue was not photoreduced by EDTA though there was an increase in the emf of the system on its exposure to light; but the presence of methylene blue in the system catalyzed its photoredn.  
 ST photoredn methylene blue histochem; EDTA methylene blue  
 photoredn  
 IT Electric potential  
     (of capri blue and methylene blue, during photoredn.,  
     histochem. in relation to)  
 IT Reduction, photochemical  
     (of dyes, by biomols. and org. mols., histochem. in relation to)  
 IT 57-00-1 64-02-8 68-89-3 103-01-5 139-13-9 1137-73-1  
 1606-01-5 5336-17-4  
 RL: BIOL (Biological study)  
     (photoredn. of methylene blue in presence of, elec. potential  
     of, histochem. in relation to)  
 IT 61-73-4 1787-57-1  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
     (photoredn. of, by biomols. and org. mols., histochem. in  
     relation to)

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4639330 N  
8889814 PHENYL  
414832 GLYCINE  
L4 107 N PHENYL GLYCINE  
(N(W) PHENYL (W) GLYCINE)

=> d 107

L4 ANSWER 107 OF 107 REGISTRY COPYRIGHT 2003 ACS  
RN 103-01-5 REGISTRY  
CN Glycine, N-phenyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)  
OTHER NAMES:  
CN (Phenylamino)acetic acid  
CN Acetic acid, (phenylamino)-  
CN Anilinoacetic acid  
CN N-(Phenylamino)acetic acid  
CN N-Phenylglycine  
FS 3D CONCORD  
MF C8 H9 N O2  
CI COM  
LC STN Files: BEILSTEIN\*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT,  
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L6 6 L5 AND (INFRARED OR INFRA ADJ RED)

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L6 ANSWER 1 OF 6 CA COPYRIGHT 2003 ACS

AN 99:96689 CA

TI The zinc tetraphenylporphin-sensitized photoredox reaction between N-phenylglycine and p-benzoquinone in polar solvents

AU Nishimoto, Seichi; Tada, Hiroaki; Kagiya, Tsutomu

CS Dep. Hydrocarbon Chem., Kyoto Univ., Kyoto, 606, Japan

SO Journal of the Chemical Society, Perkin Transactions 2: Physical Organic Chemistry (1972-1999) (1983), (6), 873-7  
CODEN: JCPKBH; ISSN: 0300-9580

DT Journal

LA English

CC 74-1 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 22

AB The photoredox reaction between N-phenylglycine (I) and p-benzoquinone (II) sensitized by Zn tetraphenylporphine (III) was studied in various solvents under N at 25.degree.. Decarboxylation of I and redn. of II occurred equimol. to give PhN:CH<sub>2</sub>, CO<sub>2</sub>, and 1,4-(HO)2C<sub>6</sub>H<sub>4</sub> when a MeCN soln. of I and II was irradiated at >500 nm in the presence of a catalytic amt. of III. III was recovered almost quant. after the photoreaction. The conversion of I increased linearly with increasing the molar ratio of III to I up to .apprx.2 .times. 10<sup>-3</sup>. The quantum yield for the III-sensitized decarboxylation of I in N-purged MeCN soln. was 0.20. The sensitizing activity of III was remarkably enhanced upon increasing the solvent polarity.

ST phenylglycine benzoquinone photoredox; zinc phenylporphine sensitizer photoredox; decarboxylation phenylglycine redn benzoquinone

IT Ultraviolet and visible spectra  
(of benzoquinone, phenylglycine, zinc tetraphenylporphine, and their mixt.)

IT Infrared spectra

Nuclear magnetic resonance  
(of benzoquinone-phenylglycine-zinc tetraphenylporphine mixt., irradn. in relation to)

IT Decarboxylation  
(of phenylglycine, in photoredox reaction with benzoquinone in presence of zinc tetraphenylporphine)

IT Redox reaction  
(photochem., of benzoquinone and phenylglycine in presence of zinc

tetraphenylporphine)

IT 103-01-5  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(decarboxylation of, in photoredox reaction with benzoquinone in presence of zinc tetraphenylporphine)

IT 106-51-4, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(photochem. redox reaction of, with phenylglycine in presence of zinc tetraphenylporphine)

IT 14074-80-7  
RL: USES (Uses)  
(sensitizer, in photoredox reaction of benzoquinone and phenylglycine)

L6 ANSWER 2 OF 6 CA COPYRIGHT 2003 ACS  
AN 58:52930 CA  
OREF 58:8962h, 8963a-h, 8964a-b

TI The oxidation products of thiocarboxylic acid amides. VII. Oxidation reactions of thioamides of oxalic acid

AU Walter, Wolfgang; Bode, Klaus Dieter

CS Univ. Hamburg, Germany

SO Ann. (1962), 660, 74-84

DT Journal

LA Unavailable

CC 35 (Noncondensed Aromatic Compounds)

AB The oxidn. of  $(\text{CSNH}_2)_2$  (I) with  $\text{H}_2\text{O}_2$  under mild conditions yields 3 thioamide S-oxides of which 1 was isolated and identified as  $[\text{C}(\text{SO})\text{NH}_2]_2$  (II).  $\text{H}_2\text{NSCC}(\text{SO})\text{NH}_2$  (III) was obtained by the oxidn. of  $\text{H}_2\text{NSCCONH}_2$  (IV). N-Substituted dithiooxamides react with  $\text{H}_2\text{O}_2$  with the oxidative elimination of S to yield the corresponding oxamides; only in the oxidns. of  $(\text{CSNHCH}_2\text{CO}_2\text{H})_2$  (V) and  $(\text{CSNHCH}_2\text{CH}_2\text{OH})_2$  (VI) could S-oxides be shown to be intermediates. O is introduced into monothiooxamides only if a primary thioamide group is present. In the carbethoxythioformamides, the thioamide group is oxidized to the thioamide S-oxide group regardless whether it is primary, secondary, or tertiary.  $\text{EtO}_2\text{CC}(\text{SO})\text{NH}_2$  (VII) and  $\text{EtO}_2\text{CC}-(\text{SO})\text{NMe}_2$  (VIII) were isolated. The color reactions with  $\text{Fe}^{+++}$ ,  $\text{Co}^{++}$ ,  $\text{Ni}^{++}$ ,  $\text{Cu}^{++}$ , and  $\text{Pb}^{++}$  salts were detd. for the following compds. (colors given in the order indicated): I, red-brown, brown, blue-violet, dark green, --;  $(\text{CSNHMe})_2$  (IX), --, --, purple, dark green, --;  $(\text{CSNHET})_2$  (X), --, --, purple, green, --;  $(\text{CSNHCH}_2\text{Ph})_2$  (XI), --, --, yellow-green, brown, --;  $\text{N},\text{N}'\text{-dicyclohexyldithiooxamide}$  (XII), light brown, --, yellow-green, brown-green, --; V, red-brown, --, yellowish, dark brown (turning light green), light-yellow; VI, pink (with a blue-green border), brown, red-violet, green, --. I (100 mg.) in 5 cc.  $\text{HCONMe}_2$  treated with 0.5 cc. 30%  $\text{H}_2\text{O}_2$  and chromatographed on paper gave spots for IV, RT 0.68 (blue with  $\text{FeCl}_3$ ), II 0.75 (olive-green with  $\text{FeCl}_3$ ), and presumably  $\text{H}_2\text{NSCCS}(\text{O})\text{NH}_2$  0.92 (red-brown with  $\text{FeCl}_3$ ); all paper chromatograms were run with 35:35:30  $\text{C}_5\text{H}_5\text{N}$ -iso-AmOH- $\text{H}_2\text{O}$  (solvent A). I (2 g.) in 50 cc.  $\text{C}_5\text{H}_5\text{N}$ , 130-40 cc. MeOH, and 900 cc.  $\text{CHCl}_3$  treated with 32 cc. 30%  $\text{H}_2\text{O}_2$  in 40 cc. MeOH, cooled to -12 to -14.degree., and filtered after 2-3 days gave 1.73 g. II, decompd. 156-8.degree.; the light yellow mother liquor concd. to about 50 cc. gave 0.43 g.  $(\text{CONH}_2)_2$  (XIII). II (100 mg.) in 30 cc.  $\text{Me}_2\text{SO}$  treated with  $\text{H}_2\text{S}$  during 10 min. gave a soln. contg. I. II (40 mg.) in 10 cc.  $\text{HCONMe}_2$  treated several hrs. at room temp. with 0.1 cc.  $\text{H}_2\text{O}_2$  gave only XIII. VI (210 mg.) in 3 cc.  $\text{HCONMe}_2$  treated with 1 cc. 30%  $\text{H}_2\text{O}_2$  and chromatographed on paper after 1.5 hrs. showed the presence of VI, Rf 0.90 (pink with  $\text{FeCl}_3$ ) (solvent A), and of the S-oxide of VI, Rf 0.59 (olive-green with  $\text{FeCl}_3$ ) (solvent A). V (240 mg.) in 10 cc.  $\text{HCONMe}_2$  treated with 1 cc. 30%  $\text{H}_2\text{O}_2$  and chromatographed showed V, Rf 0.77 (red-brown with  $\text{FeCl}_3$ ), and the S-oxide of V, Rf 0.59 (olive-green with  $\text{FeCl}_3$ ). IX (150 mg.) in 2-4 cc.  $\text{HCONMe}_2$  treated with 0.5-2 cc. 30%  $\text{H}_2\text{O}_2$ , kept 24 hrs., filtered from the pptd. S, and evapd. yielded 100 mg.  $(\text{CONMe}_2)_2$ , m. 216.degree. (hot  $\text{H}_2\text{O}$ ). Similar oxidns. of the following dithiooxamides were preformed (solvent used and m.p. of the resulting corresponding oxamide given): X,  $\text{HCO-NMe}_2$  (tetrahydrofuran, dioxane), 176-8.degree. ( $\text{EtOH}$ ); XI,  $\text{HCO-NMe}_2$  (tetrahydrofuran,  $\text{C}_5\text{H}_5\text{N}$ , MeOH),

218-19.degree. (AcOH); XII, HCONMe<sub>2</sub> (tetrahydrofuran, dioxane, C<sub>5</sub>H<sub>5</sub>N, MeOH), 270.degree. (EtOH); (CSNHPH)<sub>2</sub>, HCONMe<sub>2</sub> (tetrahydrofuran, dioxane), 246-7.degree. (C<sub>6</sub>H<sub>6</sub>); VI, MeOH, 170.degree. (MeOH); V, MeOH, 248.degree. (decompn.) (aq. HCONMe<sub>2</sub>). (CSNHCH<sub>2</sub>CO<sub>2</sub>Et)<sub>2</sub> (1.5 g.) in 30 cc. HCONMe<sub>2</sub> heated 0.5 hr. at 50-60.degree. and then to 80-90.degree. and kept several days gave only unreacted starting material. EtO<sub>2</sub>CCONH<sub>2</sub> (50 g.) and 22.8 g. powd. P<sub>4</sub>S<sub>10</sub> yielded 33 g. EtO<sub>2</sub>-CCSNH<sub>2</sub> (XIV), yellow leaflets, m. 58-60.degree. (EtOH). XIV (13.3 g.) and 1.7 g. NH<sub>3</sub> in 30 cc. EtOH gave 7 g. IV, lemon-yellow crystals, m. 179-81.degree. (hot EtOH). IV (1.2 g.) in 15 cc. HCO-NMe<sub>2</sub> treated with 9 cc. 30% H<sub>2</sub>O<sub>2</sub> in 3 portions at about 40.degree., cooled 4 hrs. in the refrigerator, and filtered yielded 920 mg. H<sub>2</sub>NOCC(SO)NH<sub>2</sub>, yellow crystals, m. 173-4.degree. (decompn.); it gives a deep blue color with FeCl<sub>3</sub> turning purple-red upon diln. with HCONMe<sub>2</sub>. XIV (10 g.) in 20 cc. MeOH treated with 2.5 g. gaseous MeNH<sub>2</sub> and refrigerated 2 hrs. yielded 5.6 g. MeNH-OCCSNH<sub>2</sub> (XV), yellow prisms, m. 139-40.degree. (MeOH). XV (0.5 g.) in 10 cc. MeOH treated about 0.5 hr. at 40-50.degree. with 1 cc. 30% H<sub>2</sub>O<sub>2</sub>, poured into an equal vol. satd. aq. NaCl, and extd. with CH-Cl<sub>3</sub> yielded 370 mg. MeNHOCC(SO)NH<sub>2</sub>, m. 144-5.degree. (EtOAc); it gives with FeCl<sub>3</sub> a blue color. IV (2.15 g.) and 1.5 g. MeNH<sub>2</sub>.HCl yielded 400 mg. MeNHSCCONH<sub>2</sub> (XVI), yellow, m. 120-1.degree. (EtOAc). XVI (100 mg.) in HCONMe<sub>2</sub> treated dropwise with 0.9 cc. 30% H<sub>2</sub>O<sub>2</sub> and concd. gave H<sub>2</sub>NOCCCONHMe, m. 226.degree. (50% EtOH). Me<sub>2</sub>NOCCSNH<sub>2</sub> (5 g.) in 50 cc. MeOH treated 0.5 hr. with 5 cc. 30% H<sub>2</sub>O<sub>2</sub>, poured after 0.5 hr. into 50 cc. satd. aq. NaCl, and extd. with CHCl<sub>3</sub>, yielded 3.7 g. (crude) Me<sub>2</sub>NOCC(SO)NH<sub>2</sub>, pale yellow prisms, m. 124-5.degree. (MeOH-C<sub>6</sub>H<sub>6</sub>); it gives with FeCl<sub>3</sub> a blue color turning purple-red on diln. with HCONMe<sub>2</sub>. Me<sub>2</sub>NSCCCONH<sub>2</sub> (59 g.) in 400 cc. dry C<sub>5</sub>H<sub>5</sub>N refluxed 1 hr. with 42.2 g. P<sub>2</sub>S<sub>5</sub>, filtered, and evapd., and the sirupy residue dissolved in 400 cc. EtOH, treated with C, and filtered gave from the filtrate 14 g. Me<sub>2</sub>NSCCCONH<sub>2</sub> (XVII), needles, m. 145.5-6.5.degree. (CHCl<sub>3</sub>). XVII (1.5 g.) in 30 cc. MeOH treated with 2.0 cc. 30% H<sub>2</sub>O<sub>2</sub>, filtered after 10 min., poured into satd. aq. NaCl, and extd. with CHCl<sub>2</sub> yielded 65 mg. unchanged XVII, red, m. 145.5.degree.. Na phenylcarbamoylmethyl thiosulfate (10 g.) and 6 g. cyclohexylamine gave 5.4 g. NS-cyclohexyl-NO-phenyl-monothiooxamide (XVIII), pale yellow needles, m. 130.degree.. XVIII (100 mg.) in 2 cc. HCONMe<sub>2</sub> or 2 cc. MeCN treated with 0.5 cc. 30% H<sub>2</sub>O<sub>2</sub>, warmed a few min. to 90.degree., and kept several days at room temp. gave in both runs N-cyclohexyl-N'-phenyloxamide, needles, m. 208-9.degree.. PhNHOCCSNHPh (224 mg.) in 10 cc. HCONMe<sub>2</sub> treated with 1 cc. 30% H<sub>2</sub>O<sub>2</sub> gave (CONHPh)<sub>2</sub>, leaflets, m. 246.degree.. XIV (5 g.) in 50 cc. CHCl<sub>3</sub> and 40 cc. MeOH treated with 12 cc. 30% H<sub>2</sub>O<sub>2</sub> in small portions at 40.degree., poured after 35 min. into 60 cc. H<sub>2</sub>O, and worked up yielded 4.1 g. VII, lemon-yellow crystals, m. 92.5-3.5.degree. (C<sub>6</sub>H<sub>6</sub>). EtO<sub>2</sub>CCONHMe (13 g.) in 130 cc. dry C<sub>5</sub>H<sub>5</sub>N refluxed 1 hr. with 5 g. P<sub>2</sub>S<sub>5</sub>, filtered hot, and evapd., and the sirupy residue treated with C in EtOH yielded 3.1 g. Et<sub>2</sub>OCCSNHMe (XIX), b.p. 136-8.degree., Rf 0.90. XIX (g.) in 10 cc. CHCl<sub>3</sub> and 5 cc. MeOH treated 2 hrs. at 38-40.degree. with 1 cc. 30% H<sub>2</sub>O<sub>2</sub> and poured into 10 cc. satd. aq. NaCl, and the org. phase worked up yielded 600 mg. Et<sub>2</sub>OCC(SO)-NHMe, pale yellow crystals, m. 32-4.degree. (petr. ether-EtOAc), Rf 0.53. EtO<sub>2</sub>CCONMe<sub>2</sub> (72.6 g.) in 500 cc. dry C<sub>5</sub>H<sub>5</sub>N refluxed 1 hr. with 42 g. P<sub>2</sub>S<sub>5</sub>, concd. to 1/3 vol., poured with stirring into 1 l. H<sub>2</sub>O, filtered, and extd. with CHCl<sub>3</sub> yielded 34 g. EtO<sub>2</sub>CCS-NMe<sub>2</sub> (XX), pale yellow crystals, m. 46-7.degree. (EtOH). XX (5 g.) in 50 cc. MeOH and 17.5 cc. 30% H<sub>2</sub>O<sub>2</sub> heated 20 min. at 40-50.degree., poured into 50 cc. satd. sq. NaCl, and extd. with CHCl<sub>3</sub> yielded 4.6 g. VIII, lemon-yellow rhombs, m. 46-7.degree., probably contg. some XX; it gives with FeCl<sub>3</sub> a red-brown color.

IT Color reactions  
     (of dithiooxamides with metals)

IT Spectra, infrared  
     (of tricarboxylic acid esters)

IT Cobalt, with dithiooxamide  
     Cobalt, with dithiooxamide  
     Cobalt, with N,N'-bis(2-hydroxyethyl)dithiooxamide

Cobalt, with N,N'-bis(2-hydroxyethyl)dithiooxamide  
 Glycine, N,N'-(dithiooxalyl)di-, copper complex  
 Glycine, N,N'-(dithiooxalyl)di-, iron complex  
 Glycine, N,N'-(dithiooxalyl)di-, lead complex  
 Lead, with N,N'-(dithiooxalyl)diglycine  
 Oxamic acid, N,N-dimethyl-2-thio-, S-oxide, Et ester, compd. with Et  
     N,N-dimethyl-2-thiooxamate  
 Oxamide, dithio-, cobalt complex  
 Oxamide, dithio-, copper complex  
 Oxamide, dithio-, iron complex  
 Oxamide, dithio-, S,S-dioxide  
 Oxamide, N,N'-bis(2-hydroxyethyl)dithio-, cobalt complex  
 Oxamide, N,N'-bis(2-hydroxyethyl)dithio-, copper complex  
 Oxamide, N,N'-bis(2-hydroxyethyl)dithio-, iron complex  
 Oxamide, N,N'-dibenzylidithio-, copper complex  
 Oxamide, N,N'-dicyclohexyldithio-, copper complex  
 Oxamide, N,N'-dicyclohexyldithio-, iron complex  
 Oxamide, N,N'-diethyldithio-, copper complex  
 Oxamide, N,N'-dimethyldithio-, copper complex  
 IT Iodonium compounds, diaryl-  
     (salts)  
 IT Copper compounds  
     Copper compounds  
         (with dithiooxamide and derivs.)  
 IT 79-40-3, Oxamide, dithio-  
     (derivs., reaction with H2O2)  
 IT 79-40-3, Oxamide, dithio-  
     (oxidn. of)  
 IT 95-99-8, Glycine, N,N'-(dithiooxalyl)di- 103-01-5, Glycine,  
     N-phenyl- 120-86-5, Oxamide, N,N'-bis(2-hydroxyethyl)dithio- 615-35-0,  
     Oxamide, N,N'-dimethyl- 615-84-9, Oxamide, N,N'-diethyl- 620-81-5,  
     Oxanilide 1871-89-2, Oxamide, N,N'-bis(2-hydroxyethyl)- 3299-64-7,  
     Oxamide, N,N'-dicyclohexyl- 3468-99-3, Acetic acid, diphenyl-, ethyl  
     ester 3551-78-8, Oxamide, N,N'-dibenzyl- 5467-22-1, Acetic acid,  
     triphenyl-, ethyl ester 16475-48-2, Oxamide, thio- 16703-48-3, Oxamic  
     acid, N,N-dimethyl-2-thio-, ethyl ester 16890-69-0, Oxamic acid,  
     N-methyl-2-thio-, ethyl ester 16890-70-3, Oxamide, N1-methyl-1-thio-  
     22509-04-2, Oxamide, methyl- 23354-00-9, Glycine, N,N'-oxalyldi-  
     26536-35-6, Acetamide, 2,2,2-triphenyl- 41168-87-0, Oxamide,  
     N2-methyl-1-thio- 41168-96-1, Oxamide, N1,N1-dimethyl-1-thio- 55285-81  
     -9, Cyclohexanecarboxylic acid, 2-oxo-1-phenyl-, ethyl ester 89695-53-4,  
     Oxamide, N2,N2-dimethyl-1-thio-, S-oxide 89712-28-7, Oxamide,  
     N2-methyl-1-thio-, S-oxide 89830-69-3, Glycine, N,N'-(dithiooxalyl)di-,  
     S-oxide 89924-49-2, Oxamic acid, 2-thio-, S-oxide, Et ester  
     90801-72-2, Oxamide, dithio-, S-oxide-(?) 91469-65-7, Oxamic acid,  
     N-methyl-2-thio-, S-oxide, Et ester 92276-94-3, Oxamide, thio-, S-oxide  
     92292-89-2, Oxamide, N-cyclohexyl-N'-phenyl- 92474-70-9, Oxamide,  
     N,N'-bis(2-hydroxyethyl)dithio-, S-oxide 92652-62-5,  
     Cyclohexanecarboxylic acid, 2-oxo-1-phenyl-, ethyl ester, oxime  
     93535-78-5, Oxamide, N2-cyclohexyl-N1-phenyl-1-thio- 96372-49-5,  
     1,1,2-Ethanetricarboxylic acid, triphenyl-, triethyl ester 96433-88-4,  
     Oxamic acid, N,N-dimethyl-2-thio-, ethyl ester, compd. with Et  
     N,N-dimethyl-2-thiooxamate S-oxide 96810-53-6, 1,1,2-  
     Ethanetricarboxanilide, 1,2,2-triphenyl-  
         (prepn. of)  
 IT 7705-08-0, Iron chloride, FeCl3  
     (reaction with thiooxamide and derivs.)  
 IT 7722-84-1, Hydrogen peroxide  
     (reactions of, with dithiooxamides)  
 IT 7439-89-6, Iron 7439-89-6, Iron  
     (with dithiooxamide and derivs.)

TI B. K. Wasson An addition compound between quinaldic acid and Nphenylglycine  
AU Oda, Daihei  
CS Defence Acad., Yokosuka  
SO Nippon Kagaku Zasshi (1961), 82, 630-2  
DT Journal  
LA Unavailable  
CC 31 (Heterocyclic Compounds-One Hetero Atom)  
AB Addn. compd. between quinaldic acid (I) and PhNHCH<sub>2</sub>CO<sub>2</sub>H (II) was prep'd. to study the nature of addn. compd. between I and tetrahydroquinaldic acid (III). Adding II to hot soln. of I in H<sub>2</sub>O formed yellow complex I.II. I and PhNH<sub>2</sub> or III and quinoline formed a reddish orange color on fusion but the color faded on cooling. Crystn. of I.III from AcOH easily sepd. the components. As to the complex I.III, the following facts were found: esterification of one of the CO<sub>2</sub>H groups gives fading color at low temp., CH<sub>2</sub>OH group instead of CO<sub>2</sub>H gives clear color, PhN group is necessary for developing color, CO<sub>2</sub>H of pyridine ring is necessary, and the color is not observed in EtOH. Infrared spectra of I.II and I.III show N-H stretching bands and the presence of a CO<sub>2</sub>H group. Above results together with the fact that PhNMeCH<sub>2</sub>CO<sub>2</sub>H (IV) forms a complex with I indicate that the complex has a cyclic structure in which CO<sub>2</sub>H of I forms a H-bond with the N of II and that of H forms a H-bond with the N of I. M.p. of I.II and I.IV are given as 159.5-61.5.degree. and 127-9.degree., resp.  
IT Spectra, infrared  
(of quinaldic acid reaction products with amino acids)  
IT Quinaldic acid, 1,2,3,4-tetrahydro-  
(reaction product with N-phenylalanine)  
IT 90800-33-2, 5,8-Quinolinedione, 2-methyl-  
(derivs.)  
IT 90924-52-0, 4,5,8-Quinolinetriol, 2-methyl-  
(prepn. of)  
IT 15727-49-8, Alanine, N-phenyl-  
(reaction product with 1,2,3,4-tetrahydroquinaldic acid)  
IT 103-01-5, Glycine, N-phenyl-  
(reaction product with quinaldic acid)  
IT 93-10-7, Quinaldic acid  
(reaction product with N-phenylglycine)  
  
L6 ANSWER 4 OF 6 CA COPYRIGHT 2003 ACS  
AN 56:29324 CA  
OREF 56:5547h-i,5548a-b  
TI Infrared spectra of aqueous solutions. I. Metal chelate compounds of amino acids  
AU Nakamoto, Kazuo; Morimoto, Yukiyoshi; Martell, Arthur E.  
CS Clark Univ., Worcester, MA  
SO J. Am. Chem. Soc. (1961), 83, 4528-32  
CODEN: JACSAT; ISSN: 0002-7863  
DT Journal  
LA Unavailable  
CC 10 (Spectra and Some Other Optical Properties)  
AB The infrared spectra of 30 metal chelate compds. prep'd. from 8 amino acids are measured both in aq. soln. and in the cryst. state. The frequency order of the carboxyl stretching vibration in a series of compds. of the same ligand can be used as a measure of relative strengths of the M-O bonds if comparison is made from data from pure samples in the same phys. state. The order found is: Ni(II) < Zn(II) < Cu(II) < Co(III) < Pd(II) < Pt(II) < Cr(III). The spectra of the aq. soln. and the hydrated and dehydrated cryst. state are compared to study H bonding. Compds. of glycine with Ni, Zn, Cu, Co, Pd, Pt, and Cr; .alpha.-alanine with Ni, Zn, Cu, Co, Pt, and Cr; .beta.-alanine with Ni and Cu; dl-valine with Ni and Cu; dl-iso-leucine with Ni and Cu; N-methylglycine with Ni and Cu; N-phenylglycine (I) with Ni, Co, and Cu; N,N-dimethylglycine with Ni and Cu were prep'd. Some new compds. are prep'd. Thus, an EtOH soln. of I is added to NaOEt in EtOH and the Na N-phenylglycinate thus obtained is dissolved in H<sub>2</sub>O and mixed with a soln. of CuCl<sub>2</sub>. The solid green ppt.

formed is bis(N-phenylglycino)Cu(II). Similarly, Ni(PhNHCH<sub>2</sub>COO)<sub>2</sub>.3H<sub>2</sub>O, Co(PhNHCH<sub>2</sub>COO)<sub>2</sub>.2H<sub>2</sub>O, Ni(Me<sub>2</sub>NCH<sub>2</sub>COO)<sub>2</sub>.2H<sub>2</sub>O, Ni(EtCH(Me)CH(NH<sub>2</sub>)COO)<sub>2</sub>.2H<sub>2</sub>O, Ni(Me<sub>2</sub>CH-CH(NH<sub>2</sub>)COO)<sub>2</sub>.2H<sub>2</sub>O, and Ni(NH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>COO)<sub>2</sub>.2H<sub>2</sub>O are prep'd. The hydrates are dehydrated by gentle heating. Infrared spectra are measured with NaCl optics. Measurements in 99.5% D<sub>2</sub>O soln. are made in 0.1-ml. cells having BaF<sub>2</sub> windows 0.019 mm. thick. The soln. concns. are 3-15% by wt. Spectra of the solids are measured in KBr disks.

IT Hydrogen bonds  
(in amino acid-metal chelate solns.)

IT Spectra, infrared  
(of amino acid chelates)

IT Nickel, bis(valinato)-  
(prep'n. and spectrum of)

IT Cobalt, tris(alaninato)-  
Copper, bis(isoleuoinato)-  
Copper, bis(valinato)-  
Nickel, bis(alaninato)-  
(spectrum of)

IT 103-01-5, Glycine, N-phenyl- 107-95-9, .beta.-Alanine  
(complexes with metals, spectra of)

IT 56-41-7, Alanine 72-18-4, Valine  
(complexes, with metals, spectra of)

IT 56-40-6, Glycine 73-32-5, Isoleucine 107-97-1, Sarcosine 1118-68-9,  
Glycine, N,N-dimethyl-  
(metal complexes, spectra of)

IT 14040-31-4, Nickel, bis(.beta.-alaninato)- 15225-76-0, Nickel,  
bis(isoleucinato)- 56819-41-1, Nickel, bis(N-phenylglycinato)-  
87564-93-0, Copper, bis(N-phenylglycinato)- 93482-94-1, Nickel,  
bis(N,N-dimethylglycinato)-  
(prep'n. and spectrum of)

IT 13479-54-4, Copper, bis(glycinato)- 13479-55-5, Nickel, bis(glycinato)-  
13842-97-2, Copper, bis(.beta.-alaninato)- 14221-43-3, Cobalt,  
tris(glycinato)- 14263-10-6, Copper, bis(alaninato)- 14281-83-5, Zinc,  
bis(glycinato)- 14592-68-8, Palladium, bis(glycinato)- 14592-69-9,  
Platinum, bis(glycinato)- 14647-06-4, Zinc, bis(alaninato)-  
16483-21-9, Chromium, tris(alaninato)- 18253-88-8, Copper,  
bis(sarcosinato)- 21747-22-8, Nickel, bis(sarcosinato)- 30596-51-1,  
Chromium, tris(glycinato)- 34275-62-2, Copper, bis(N,N-  
dimethylglycinato)- 56870-40-7, Cobalt, bis(N-phenylglycinato)-  
74868-20-5, Platinum, bis(alaninato)-  
(spectrum of)

L6 ANSWER 5 OF 6 CA COPYRIGHT 2003 ACS

AN 51:28704 CA

OREF 51:5559a-d

TI Infrared spectra of secondary amines and their salts

AU Heacock, R. A.; Marion, Leo

CS Natl. Research Council, Ottawa

SO Can. J. Chem. (1956), 34, 1782-95

DT Journal

LA Unavailable

CC 3 (Electronic Phenomena and Spectra)

AB Frequencies of absorption bands in various significant regions of the spectrum from 600 to 4000 cm.<sup>-1</sup> are given for 19 secondary amines and for hydrochlorides or other salts of each amine, as well as for several salts of primary and tertiary amines. Secondary amines can be detected by the appearance of a band in the region 1620-1560 cm.<sup>-1</sup> in the spectra of their salts which is invariably absent in the spectra of the bases themselves. This band is assigned to NH<sub>2+</sub> deformation. The spectra of aromatic bases are complicated by ring absorption in the same region, but in many cases the assignment can be made, although with less certainty. For zwitterions the correlation is more difficult. The normal NH stretching band of secondary amines is attenuated in the salt spectra and displaced to lower frequencies. The assignment of NH<sub>2+</sub> vibration bands is supported by the shifts observed upon deuteration of piperidine-HCl. Reaction of dry HCl

with a soln. of 5,6-dihydrophenanthridine in benzene yields the hydrochloride, which seps. from aq. alc. HCl as colorless needles, m. 198.degree.. Anhyd. piperazine perchlorate, m. 308.degree. (decompn.), is prep'd. by drying the hydrate at 100.degree. in vacuo. Repeated heating to 80.degree. of piperidine-HCl in D<sub>2</sub>O soln. yields N-deuteriopiperidinium deuteriochloride, of which 6 g. is added to a cool soln. of 2.4 g. NaOD in 15 ml. D<sub>2</sub>O, the soln. satd. with Na<sub>2</sub>SO<sub>4</sub> and extd. with dry ether, the ext. evapd. and distd. to yield N-deuteriopiperidine, a colorless liquid, b. 106-8.degree..

IT Amines  
(and compds., spectra of)

IT Infrared spectra  
(of amines (secondary) and their salts)

IT Anlobina  
Anlobina, hydrochloride  
Cytisine, 3-methyl-  
Morpholine, hydrochloride  
Piperidine, hydrochloride  
Piperidine-1-d, hydrochloride-d  
Proline  
Proline, hydrochloride  
Pseudoconhydrine, hydrochloride  
Pyrrolidine, picrate  
(spectra of)

IT Ethanol, 2,2'-iminodi-, nitrate  
Phenethylamine, N,N,.alpha.-trimethyl-, d-  
(spectrum of)

IT Norephedrine, N,N-dimethyl, hydrochloride  
(spectrum of l-)

IT 119-68-6, Anthranilic acid, N-methyl-  
(and derivs., spectra of)

IT 108-91-8, Cyclohexylamine 110-85-0, Piperazine  
(and salts, spectra of)

IT 75-50-3, Trimethylamine 103-01-5, Glycine, N-phenyl- 103-69-5,  
Aniline, N-ethyl- 107-97-1, Sarcosine 110-89-4, Piperidine 110-91-8,  
Morpholine 122-39-4, Diphenylamine 123-75-1, Pyrrolidine 140-55-6,  
Pseudoconhydrine 485-35-8, Cytisine 506-59-2, Dimethylamine,  
hydrochloride 537-67-7, Diphenylamine, hydrochloride 593-81-7,  
Trimethylamine, hydrochloride 637-96-7, Sarcosine, hydrochloride  
694-58-6, Piperidine-1-d 1615-80-1, Hydrazine, 1,2-diethyl- 2739-17-5,  
Quinoline, 1,2,3,4-tetrahydro-, hydrochloride 4348-19-0, Aniline,  
N-ethyl-, hydrochloride 27799-79-7, Phenanthridine, 5,6-dihydro-  
56676-71-2, Glycine, N-phenyl-, hydrochloride 100727-06-8,  
Phenanthridine, 5,6-dihydro-, hydrochloride 112574-30-8, Cytisine,  
3-methyl-, perchlorate 115051-74-6, Cytisine, perchlorate 117882-47-0,  
Hydrazine, 1,2-diethyl-, hydrochloride  
(spectra of)

IT 51-92-3, Ammonium, tetramethyl- 3426-74-2, Ammonium, trimethylphenyl-  
(spectrum of)

L6 ANSWER 6 OF 6 CA COPYRIGHT 2003 ACS  
AN 51:28703 CA  
OREF 51:5558i,5559a  
TI Infrared absorption spectra of the N-CH<sub>3</sub> radical  
AU Oseko, Shigeo  
SO J. Pharm. Soc. Japan (1957), 77, 120  
DT Journal  
LA Unavailable  
CC 3 (Electronic Phenomena and Spectra)  
AB Examn. of infrared absorption spectra of 1-ephedrine in CHCl<sub>3</sub>  
showed absorption at 3.56 .mu.. Similarly, the following compds. were  
tested (compd. and absorption wave length in .mu. given):  
d-PhCH<sub>2</sub>CH(NHMe)Me, 3.57; dl-PhCH(NHMe)Me, 3.57; 1-N-methylephedrine,  
3.54-3.59; d-PhCH<sub>2</sub>CH(NMe<sub>2</sub>)Me, 3.54-3.59; dl-PhCH(NMe<sub>2</sub>)Me, 3.55-3.60;  
dl-6-dimethylamino-4,4-diphenyl-3-heptanone, 3.52-3.60.

IT      Amines  
          (and compds., spectra of)  
IT      Infrared spectra  
          (of methylamino group in l-ephedrine and related compds.)  
IT      Methylamino group  
          (spectrum of, in l-ephedrine and related compds.)  
IT      Anolobina  
Proline  
Pyrrolidine, picrate  
          (spectra of)  
IT      Ephedrine  
Ethanol, 2,2'-iminodi-, nitrate  
Methadone, dl-  
Phenethylamine, N,.alpha.-dimethyl-, d-  
Phenethylamine, N,N,.alpha.-trimethyl-, d-  
          (spectrum of)  
IT      119-68-6, Anthranilic acid, N-methyl-  
          (and derivs., spectra of)  
IT      103-01-5, Glycine, N-phenyl- 103-69-5, Aniline, N-ethyl-  
107-97-1, Sarcosine 110-91-8, Morpholine 122-39-4, Diphenylamine  
123-75-1, Pyrrolidine 124-40-3, Dimethylamine 140-55-6,  
Pseudoconhydrine 485-35-8, Cytisine 506-59-2, Dimethylamine,  
hydrochloride 1615-80-1, Hydrazine, 1,2-diethyl- 27799-79-7,  
Phenanthridine, 5,6-dihydro-  
          (spectra of)  
IT      2449-49-2, Benzylamine, N,N,.alpha.-trimethyl- 32512-24-6, Benzylamine,  
N,.alpha.-dimethyl-  
          (spectrum of dl-)

=> d his

(FILE 'HOME' ENTERED AT 10:14:09 ON 05 MAY 2003)

FILE 'REGISTRY' ENTERED AT 10:14:14 ON 05 MAY 2003

L1      107 S N PHENYL GLYCINE  
L2      0 S N PHENYL GLYCINE/CN  
L3      0 S N PHENYLGLYCINE/CN  
L4      107 S N PHENYL GLYCINE  
L5      1 S 103-01-5

FILE 'CA' ENTERED AT 10:15:33 ON 05 MAY 2003

L6      6 S L5 AND (INFRARED OR INFRA ADJ RED)

=> s 15 and photo?  
      638 L5  
      1144659 PHOTO?  
L7      311 L5 AND PHOTO?

=> s 17 and ir  
      493420 IR  
L8      7 L7 AND IR

=> s 18 not 16  
L9      7 L8 NOT L6

=> d all 1-7

L9      ANSWER 1 OF 7 CA COPYRIGHT 2003 ACS  
AN      132:258189 CA  
TI      Near-IR sensitive polymerizable composition for lithographic  
plate  
IN      Urano, Toshiyoshi; Hino, Etsuko  
PA      Mitsubishi Chemical Industries Ltd., Japan  
SO      Jpn. Kokai Tokkyo Koho, 37 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03F007-027  
ICS C08F002-50; G03F007-00; G03F007-004; G03F007-028; G03F007-031

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 2000098603  | A2   | 20000407 | JP 1998-272845  | 19980928 |
| PRAI | JP 1998-272845 |      | 19980928 |                 |          |

AB The near-IR sensitive polymerizable compn. for lithog. plate has an ethylenic unsatd. compd., a cyanine dye cation with heterocyclic rings connected through a polymethylene chain, an org. borate anion, and an aliph. amino acid, an aliph. amino acid ester, or a dipole ion of aliph. amino acid or the ester. The compn. provides the high sensitivity towards near-IR light, the excellent stability over time, and the insensitivity towards UV light.

ST near IR sensitive photopolymerizable compn lithog plate

IT Lithographic plates  
(near-IR sensitive polymerizable compn. for lithog. plate)

IT 103-01-5, N-Phenylglycine 21911-84-2 24305-03-1 47252-39-1  
62750-11-2 64401-02-1 77001-81-1 117522-01-7, Tetramethylammonium n-butyltriphenylborate 191726-37-1 193687-62-6 193687-63-7  
RL: TEM (Technical or engineered material use); USES (Uses)  
(near-IR sensitive polymerizable compn.)

L9 ANSWER 2 OF 7 CA COPYRIGHT 2003 ACS

AN 130:244474 CA

TI Formation of resist pattern with resistance to plating

IN Hyuga, Atsuyoshi; Sato, Hiroaki

PA Nippon Synthetic Chemical Industry Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03F007-004  
ICS G03F007-004; G03F007-027; G03F007-031; G03F007-40; H05K003-06;  
H05K003-18

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 11084641    | A2   | 19990326 | JP 1997-260847  | 19970908 |
| PRAI | JP 1997-260847 |      | 19970908 |                 |          |

AB The method involves forming a photosensitive resin compn. layer contg. (A) a base polymer with acid value 95-250 mg/KOH and av. mol. wt. 5000-200,000, (B) an ethylenic unsatd. compd. contg. .gtoreq.50 wt.% ethyleneoxide-modified trimethylolpropane triacrylate, and (C) a polymnn. initiator on a metal substrate surface to obtain a resist, exposing, developing, and heating the resist by far IR ray radiation. The pattern shows excellent sensitivity, resln., resist-peeling property, adhesion to the substrate, and resistance to etching and plating.

ST resist pattern formation ethylenic unsatd compd; IR radiation

resist pattern formation; plating resistance resist pattern formation

IT IR radiation

**Photoresists**  
(formation of resist pattern with resistance to plating)

IT 28262-63-7P, Butyl methacrylate-methacrylic acid-methyl methacrylate copolymer 56925-73-6P, Butyl methacrylate-2-ethylhexyl acrylate-methacrylic acid-methyl methacrylate copolymer

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (formation of resist pattern with resistance to plating)

IT 77181-47-6, 2,2'-Dimethoxy-2-phenylacetophenone  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (formation of resist pattern with resistance to plating)

IT 103-01-5, N-Phenylglycine 811-32-5, 2,4,5-Triphenylimidazole dimer 15625-89-5D, Trimethylolpropane triacrylate, ethylene oxide-modified 52496-08-9, Polypropylene glycol diacrylate  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (formation of resist pattern with resistance to plating)

L9 ANSWER 3 OF 7 CA COPYRIGHT 2003 ACS  
 AN 130:102883 CA  
 TI Near **IR-sensitive photoimageable/photopolymerizable** compositions  
 IN Weed, Gregory Charles; Fabricius, Dietrich Max  
 PA E.I. Du Pont De Nemours and Company, USA  
 SO Eur. Pat. Appl., 32 pp.  
 CODEN: EPXXDW

DT Patent  
 LA English  
 IC ICM G03F007-031  
 .ICS G03C001-73; B41M005-36  
 CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

|      | PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE     |
|------|--|------|----------|-----------------|----------|
| PI   | EP 889363  | A1   | 19990107 | EP 1998-100692  | 19980116 |
|      | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO  |      |          |                 |          |
|      | AU 746399  | B2   | 20020502 | AU 1998-52167   | 19980120 |
|      | AU 9852167   | A1   | 19990812 |                 |          |
|      | JP 11149154  | A2   | 19990602 | JP 1998-91870   | 19980403 |
|      | US 2002064728  | A1   | 20020530 | US 2001-775988  | 20010202 |
| PRAI | US 1996-708476   | A    | 19960905 |                 |          |
|      | US 1997-888242   | A    | 19970703 |                 |          |
| OS   | MARPAT 130:102883  |      |          |                 |          |
| AB   | Novel <b>photoimageable/photopolymerizable</b> compns. are disclosed which contain dyes that absorb strongly in the near IR regions. These dyes are useful as <b>photosensitizers</b> for initiating a variety of <b>photoimaging</b> and <b>photopolymn.</b> reactions. Imaging media are disclosed herein which are sensitive in the near IR regions and which can initiate polymn. of ethylenically unsatd. monomer components in neg.-acting <b>photopolymer</b> systems and/or which can initiate conversion of leuco dyes to their corresponding colored dye form. These imaging media comprise either a near IR dye <b>photochem.</b> sensitizer, a hexaarylbimidazole <b>photoinitiator</b> , a chain transfer agent, and a <b>photopolymerizable</b> material. These imaging media are useful in a variety of <b>photopolymer</b> products, including <b>photoresists</b> , proofing films, and holog. recording films. |      |          |                 |          |
| ST   | <b>photopolymerizable photoimaging</b> compn near IR ; neg <b>photoresist photopolymerizable</b> near IR ; holog recording near IR <b>photopolymerizable</b> compn   |      |          |                 |          |
| IT   | <b>Photoimaging</b> materials<br>(near IR; <b>photopolymerizable</b> compns. contg. IR dyes, hexaarylbimidazoles, chain transfer agents, and ethylenically unsatd. compds. as)   |      |          |                 |          |
| IT   | <b>Photoresists</b><br>( <b>photopolymerizable</b> compns. contg. IR dyes, hexaarylbimidazoles, chain transfer agents, and ethylenically unsatd. compds. as)   |      |          |                 |          |
| IT   | <b>Holography</b>  |      |          |                 |          |

(photopolymerizable compns. contg. IR dyes,  
 hexaarylbiimidazoles, chain transfer agents, and ethylenically unsatd.  
 compds. for)  
 IT Printing plates  
 (photopolymerizable compns. contg. IR dyes,  
 hexaarylbiimidazoles, chain transfer agents, and ethylenically unsatd.  
 compds. for color proofs for)  
 IT 55281-19-1 116188-88-6 219537-63-0 219537-64-1 219537-65-2  
 219537-67-4 219537-69-6  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (IR photosensitizer for photopolymerizable  
 photoimaging compns.)  
 IT 103-01-5, N-Phenylglycine 128-37-0, Butylated hydroxytoluene,  
 uses 479-59-4, Julolidine 868-77-9 1707-68-2 9003-17-2  
 9003-55-8, Butadiene-styrene copolymer 13048-33-4 15625-89-5,  
 Trimethylolpropane triacrylate 25133-97-5, Ethyl acrylate-methacrylic  
 acid-methyl methacrylate copolymer 28961-43-5, Ethoxylated  
 trimethylolpropane triacrylate 34122-40-2, 1,4,4-Trimethyl-2,3-  
 diazabicyclo[3.2.2]non-2-ene-2,3-dioxide 154482-21-0  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (near IR-sensitive photopolymerizable  
 photoimaging compns. contg.)  
 IT 14134-81-7P 42952-29-4P 61224-41-7P 141914-99-0P 219537-50-5P  
 219537-51-6P 219537-56-1P  
 RL: RCT (Reactant); SPN (Synthetic preparation); TEM (Technical or  
 engineered material use); PREP (Preparation); RACT (Reactant or reagent);  
 USES (Uses)  
 (prepn. and reaction in prep. IR photosensitizers  
 for photopolymerizable photoimaging compns.)  
 IT 100498-66-6P 219537-49-2P 219537-52-7P 219537-53-8P 219537-55-0P  
 219537-57-2P 219537-58-3P 219537-60-7P 219537-61-8P  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material  
 use); PREP (Preparation); USES (Uses)  
 (prepn. and use as photosensitizer for  
 photopolymerizable photoimaging compns.)  
 IT 74-89-5, Methylamine, reactions 75-03-6, Iodoethane 80-40-0, Ethyl  
 tosylate 80-48-8, Methyl tosylate 120-92-3, Cyclopentanone 769-42-6,  
 1,3-Dimethylbarbituric acid 1640-39-7 2213-63-0, 2,3-  
 Dichloroquinoxaline 2682-45-3, 2-Methylnaphtho[1,2-d]thiazole  
 3119-93-5, 3-Ethyl-2-methylbenzothiazolium iodide 6780-49-0, Ethyl  
 isoformanilide 20048-92-4 76328-38-6, 3-Ethyl-6-methoxy-2-  
 methylbenzothiazolium iodide 219537-54-9 219537-62-9  
 RL: RCT (Reactant); TEM (Technical or engineered material use); RACT  
 (Reactant or reagent); USES (Uses)  
 (reaction in prep. IR photosensitizers for  
 photopolymerizable photoimaging compns.)

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Du Pont; EP 0437259 A 1991 CA
- (2) Du Pont Deutschland; DE 4240141 A 1994 CA
- (3) Kouichi, K; US 4636459 A 1987 CA
- (4) Mitsubishi Chem Ind; EP 0300410 A 1989 CA
- (5) Toppan Printing Co Ltd; JP 08297364 A 1996 CA

L9 ANSWER 4 OF 7 CA COPYRIGHT 2003 ACS

AN 128:154902 CA

TI Photocuring method by shielding oxygen on the surface of  
 photocurable materials

IN Kamata, Hirotoshi; Watanabe, Takeo; Oga, Kazuhiko; Sugita, Shuichi

PA Showa Denko K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

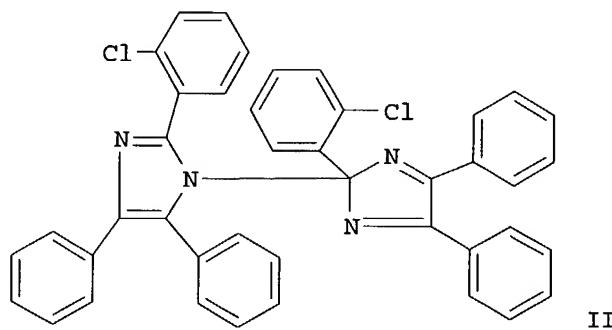
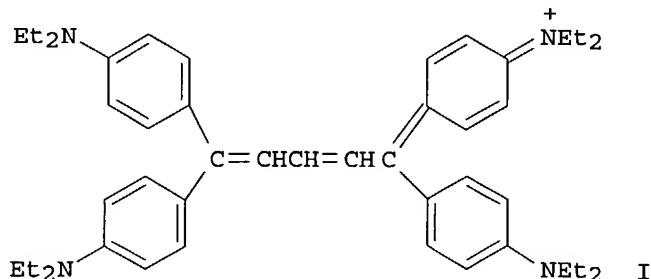
IC ICM C08F002-48

ICS B29C067-00; C08F002-44; C09D004-00; C09D201-00  
CC 37-6 (Plastics Manufacture and Processing)

Section cross-reference(s): 42

FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 10007707    | A2   | 19980113 | JP 1996-164728  | 19960625 |
| PRAI | JP 1996-164728 |      |          |                 | 19960625 |
| GI   |                |      |          |                 |          |



AB A method includes applying aq. solns. of film-formable water-sol. org. polymers on the surface of **photocurable** materials to shield O in the air and irradiating with visible ray and near-IR ray. The films made from the water-sol. org. polymers can be easily removed after **photocuring**. Preferably, the **photocurable** materials contain (A) ethylenically unsatd. compds., (B) near-IR radical polymn. initiators, (C) visible ray radical polymn. initiators, and (D) .gt;req.1 filler chosen from pigments, dyes, extender pigments, and fiber reinforcers. Thus, a compn. comprising Ripoxy SP 1509 75, styrene 25, talc 100, I butyltriphenylborate 0.10, tetrabutylammonium butyltriphenylborate 0.50, II 0.50, and 2-mercaptopbenzothiazole 0.50 part, was poured into a mold, coated with aq. 5% Poval 217 (III) on the surface of the compn., irradiated, and freed of the III film to give a cured product having a tack-free surface.

ST oxygen shield coating radical **photocuring**; vinyl ester styrene **photocuring**; polymn inhibitor oxygen shield

IT Polyoxalkylenes, uses

RL: TEM (Technical or engineered material use); USES (Uses)  
(PEO 15, coatings; **photocuring** method by coating with water-sol. polymers for shielding oxygen on **photocurable** compn. surfaces)

IT Epoxy resins, preparation

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PREP (Preparation); USES (Uses)  
(acrylates, polymers with styrene, **photocured**, **photocuring** method by coating with water-sol. polymers for

IT shielding oxygen on **photocurable** compn. surfaces)  
IT Polyesters, preparation  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PREP (Preparation); USES (Uses)  
(acrylic, **photocured**; **photocuring** method by coating with water-sol. polymers for shielding oxygen on **photocurable** compn. surfaces)  
IT Gelatins, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(coatings; **photocuring** method by coating with water-sol. polymers for shielding oxygen on **photocurable** compn. surfaces)  
IT Polymerization inhibitors  
(oxygen; **photocuring** method by coating with water-sol. polymers for shielding oxygen on **photocurable** compn. surfaces)  
IT Polymerization catalysts  
Polymerization catalysts  
(photochem., radical; **photocuring** method by coating with water-sol. polymers for shielding oxygen on **photocurable** compn. surfaces)  
IT Coating materials  
Shields  
(**photocuring** method by coating with water-sol. polymers for shielding oxygen on **photocurable** compn. surfaces)  
IT Acrylic polymers, preparation  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PREP (Preparation); USES (Uses)  
(polyester-, **photocured**; **photocuring** method by coating with water-sol. polymers for shielding oxygen on **photocurable** compn. surfaces)  
IT Polyesters, preparation  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PREP (Preparation); USES (Uses)  
(unsatd., **photocured**; **photocuring** method by coating with water-sol. polymers for shielding oxygen on **photocurable** compn. surfaces)  
IT Polymers, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(water-sol.; **photocuring** method by coating with water-sol. polymers for shielding oxygen on **photocurable** compn. surfaces)  
IT 25322-68-3, PEO 15  
RL: TEM (Technical or engineered material use); USES (Uses)  
(PEO 15, coatings; **photocuring** method by coating with water-sol. polymers for shielding oxygen on **photocurable** compn. surfaces)  
IT 9002-89-5, Poval 217  
RL: TEM (Technical or engineered material use); USES (Uses)  
(Poval 217, coatings; **photocuring** method by coating with water-sol. polymers for shielding oxygen on **photocurable** compn. surfaces)  
IT 9003-39-8, Polyvinylpyrrolidone 9004-32-4, Carboxymethyl cellulose sodium salt 9005-25-8, Starch, uses 9057-02-7, Pullulan 28408-65-3, Poly(N-Vinylacetamide)  
RL: TEM (Technical or engineered material use); USES (Uses)  
(coatings; **photocuring** method by coating with water-sol. polymers for shielding oxygen on **photocurable** compn. surfaces)  
IT 14807-96-6, Talc, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(extender pigment; **photocuring** method by coating with water-sol. polymers for shielding oxygen on **photocurable** compn. surfaces)  
IT 54847-75-5P, Rigolac 2141 115856-61-6P 115980-50-2P 137803-90-8P,

U-PICA 6424 202530-48-1P 202530-49-2P 202530-50-5P 202535-00-0P  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PREP (Preparation); USES (Uses)  
     (photocured; photocuring method by coating with water-sol. polymers for shielding oxygen on photocurable compn. surfaces)

IT 199128-41-1P, Rigolac G 200GMA  
 RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)  
     (photocured; photocuring method by coating with water-sol. polymers for shielding oxygen on photocurable compn. surfaces)

IT 7782-44-7, Oxygen, uses  
 RL: CAT (Catalyst use); USES (Uses)  
     (photocuring method by coating with water-sol. polymers for shielding oxygen on photocurable compn. surfaces)

IT 99-97-8, N,N-Dimethyl-p-toluidine 102-71-6, Triethanolamine, uses  
     103-01-5, n-Phenylglycine 134-81-6 149-30-4,  
     2-Mercaptobenzothiazole 583-39-1 21245-01-2, Isoamyl p-dimethylaminobenzoate 79044-56-7 96233-24-8 120307-06-4,  
     Tetrabutylammonium butyltriphenylborate 141714-54-7 159116-57-1  
     174285-64-4, Irgacure 1700 174914-36-4 184591-58-0 189947-80-6  
     189947-84-0 189947-86-2 189947-87-3 192642-08-3 202530-51-6  
     202530-52-7 202530-53-8 202530-54-9  
 RL: CAT (Catalyst use); USES (Uses)  
     (radical photopolymn. catalyst; photocuring method by coating with water-sol. polymers for shielding oxygen on photocurable compn. surfaces)

L9 ANSWER 5 OF 7 CA COPYRIGHT 2003 ACS  
 AN 125:88166 CA  
 TI Photocurable resin compositions for motor balance  
 IN Kishi, Katsuhiko  
 PA Three Bond Co Ltd, Japan  
 SO Jpn. Kokai Tokkyo Koho, 6 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM C08F002-48  
     ICS C08F020-10; G01M001-32; H02K015-16  
 ICA F16F015-32  
 CC 37-6 (Plastics Manufacture and Processing)  
     Section cross-reference(s): 42  
 FAN.CNT 1

| PATENT NO.          | KIND   | DATE     | APPLICATION NO. | DATE     |
|---------------------|--|----------|-----------------|----------|
| PI JP 08104705      | A2   | 19960423 | JP 1994-260940  | 19941003 |
| PRAI JP 1994-260940 |  | 19941003 |                 |          |
| AB                  | The compns. comprise (a) radical-polymerizable ethylenically unsatd. compds., (b) inorg. fillers, (c) catalysts absorbing visible light, and (d) heat-sensitive catalyst or (e) catalysts absorbing IR and visible light. A compn. contained 40:60 epoxy acrylate-isobornyl acrylate copolymer 100, glass beads 600, .alpha.-alumina 10, camphorquinone 1, and BPO 0.5 part. |          |                 |          |
| ST                  | photocurable resin compn motor balance; epoxy acrylate copolymer motor   |          |                 |          |
| IT                  | Electric motors<br>Putty<br>(photocurable resin compns. for motor balance)   |          |                 |          |
| IT                  | Glass, oxide<br>RL: MOA (Modifier or additive use); USES (Uses)<br>(beads, photocurable resin compns. for motor balance)   |          |                 |          |
| IT                  | Polymerization catalysts<br>(radical, photocurable resin compns. for motor balance)  |          |                 |          |
| IT                  | 1344-28-1, Aluminum oxide (Al2O3), uses<br>RL: MOA (Modifier or additive use); USES (Uses)   |          |                 |          |

IT      (filler; **photocurable** resin compns. for motor balance)  
 78-67-1, AIBN    94-36-0, BPO, uses 103-01-5, N-Phenylglycine  
 134-81-6, Benzil    465-29-2, Camphorquinone    33273-09-5  
 RL: CAT (Catalyst use); USES (Uses)  
 (photocurable resin compns. for motor balance)  
 IT      5888-33-5D, Isobornyl acrylate, polymers with epoxy acrylate  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material  
 use); USES (Uses)  
 (photocurable resin compns. for motor balance)

L9     ANSWER 6 OF 7 CA COPYRIGHT 2003 ACS  
 AN    125:13535 CA  
 TI    Photocurable one-component putty materials  
 IN    Kishi, Katsuhiko  
 PA    Three Bond Co Ltd, Japan; Showa Denko Kk; Tokuyama Sekyu Kagaku Kk  
 SO    Jpn. Kokai Tokkyo Koho, 6 pp.  
 CODEN: JKXXAF

DT    Patent  
 LA    Japanese  
 IC    ICM C09D005-34  
 ICS    C09D005-00  
 CC    42-11 (Coatings, Inks, and Related Products)  
 FAN.CNT 1

| PATENT NO.             | KIND   | DATE     | APPLICATION NO. | DATE     |
|------------------------|--|----------|-----------------|----------|
| PI    JP 08060044      | A2   | 19960305 | JP 1994-222678  | 19940825 |
| PRAI    JP 1994-222678 |  | 19940825 |                 |          |
| AB                     | Title materials contain (A) ethylenically unsatd. group-contg. compds.,<br>(B) fillers, and (C) mixts. contg. UV-absorbing catalysts and<br>heat-activating catalysts or (D) UV- and IR-absorbing catalysts.<br>Thus, 100 parts polymer obtained from an epoxy acrylate and isobornyl<br>acrylate was mixed with 150 parts talc, 1 part camphorquinone, and 1 part<br>benzoyl peroxide, applied on an Fe sheet, and irradiated with a Xe lamp<br>for 2 min to give a film. |          |                 |          |
| ST                     | <b>photocurable</b> ethylenically unsatd compd putty   |          |                 |          |
| IT                     | Dyes, cyanine<br>Polymerization catalysts<br>Putty<br>(photocurable one-component putty materials contg.<br>ethylenically unsatd. compds.)   |          |                 |          |
| IT                     | 14807-96-6, Talc, uses<br>RL: MOA (Modifier or additive use); USES (Uses)<br>(fillers; <b>photocurable</b> one-component putty materials contg.<br>ethylenically unsatd. compds.)  |          |                 |          |
| IT                     | 78-67-1, Azobisisobutyronitrile    94-36-0, Benzoyl peroxide, uses<br>103-01-5, N-Phenylglycine    134-81-6, Benzil    465-29-2,<br>Camphorquinone    33273-09-5<br>RL: CAT (Catalyst use); USES (Uses)<br>(photocurable one-component putty materials contg.<br>ethylenically unsatd. compds.)  |          |                 |          |
| IT                     | 5888-33-5D, Isobornyl acrylate, polymers with epoxy acrylates<br>RL: POF (Polymer in formulation); TEM (Technical or engineered material<br>use); USES (Uses)<br>(photocurable one-component putty materials contg.<br>ethylenically unsatd. compds.)  |          |                 |          |
| IT                     | 7439-89-6, Iron, miscellaneous<br>RL: MSC (Miscellaneous)<br>(substrate; <b>photocurable</b> one-component putty materials contg.<br>ethylenically unsatd. compds.)  |          |                 |          |

L9     ANSWER 7 OF 7 CA COPYRIGHT 2003 ACS  
 AN    114:25295 CA  
 TI    Polymerizable fluorine-containing composition for biomedical use  
 IN    Purbrick, Malcom Donald; Bowers, Roderick William Jonath; Wagner, Hans  
 Max; Bowen, Joanna

PA Kodak Ltd., UK; Eastman Kodak Co.  
SO PCT Int. Appl., 18 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM C08F220-00

ICS C08F220-22; C08F220-56

CC 37-6 (Plastics Manufacture and Processing)  
Section cross-reference(s): 9, 34, 35, 38

FAN.CNT 1

|      | PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|------|---|------|----------|-----------------|----------|
| PI   | WO 9007527  | A1   | 19900712 | WO 1990-GB13    | 19900104 |
|      | W: CA, JP, US   |      |          |                 |          |
|      | RW: AT, BE, CH, DE, DK, ES, FR, GB, IT, LU, NL, SE    |      |          |                 |          |
|      | CA 2024102  | AA   | 19900707 | CA 1990-2024102 | 19900104 |
|      | EP 403638   | A1   | 19901227 | EP 1990-901626  | 19900104 |
|      | R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, LU, NL, SE |      |          |                 |          |
|      | JP 03503182   | T2   | 19910718 | JP 1990-501512  | 19900104 |
|      | US 5086138  | A    | 19920204 | US 1990-571618  | 19900904 |
| PRAI | GB 1989-250   |      | 19890106 |                 |          |
|      | WO 1990-GB13  |      | 19900104 |                 |          |

AB A title compn. comprises an ethylenic diluent monomer(s) (some of which is preferably F-contg.); an ethylenic monomer contg. a reactive ester group capable of coupling with an amino compd. to form an amide link; and a (photo)polymn. initiator. The amino group-contg. compd. may be a protein. Thus, a mixt. of acrylamide 4.97 g, 2,2,2-trifluoromethylacrylamide 5.01, methacrylamidocaproic acid N-hydroxysuccinimido ester 2.96 g, AIBN 0.06 g, and DMF 30 mL was stirred at 60.degree. under N for 5 h; the viscous soln. was dild. with DMF and kept overnight; and the polymer (I) pptd. into Et2O. A coating soln. prep'd. by dissolving I (10% wt./wt.) in DMF and glutaraldehyde (10% wt./wt., band on polymer) crosslinker was coated in a polyester (Ester) with a gravure roller at 1-2 m/min gave a wet laydown of 2.5 mLs/250 cm<sup>2</sup>. A sample of dried, crosslinkable content product was treated with a soln. of albumin and IR anal. indicating coupling at the active ester sites in I due to amide formation.

ST acrylamide copolymer coating affinity chromatog; trifluoromethylacrylamide copolymer coating affinity chromatog; methylacrylamidocaproic hydroxysuccinimido ester copolymer; albumin coupling polymer amide formation; photopolymn catalyst acrylamide copolymer prepn

IT Ligands

RL: USES (Uses)  
(amino compds., immobilization of, polymerizable fluorine-contg. crosslinkable compns. for)

IT Amines, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)  
(coupling of, with fluoro polymers contg. reactive ester groups, immobilization by)

IT Amides, preparation

RL: FORM (Formation, nonpreparative)  
(formation of, in coupling of amines with fluoro polymer compns. for affinity chromatog.)

IT Crosslinking agents

(glutaraldehyde, by fluorine-contg. copolymer compns., for affinity chromatog.)

IT Amino acids, uses and miscellaneous

RL: USES (Uses)  
(immobilization of, fluorine-contg. polymerizable crosslinkable compns. for)

IT Proteins, uses and miscellaneous

RL: USES (Uses)  
(immobilization of, polymerizable fluorine-contg. crosslinkable compns. for)

IT Peptides, preparation

RL: PREP (Preparation)  
     (prepn. of, amino acid immobilization in, fluorine-contg. polymerizable  
     compns. for)  
 IT   Transparent materials  
     (xerogel membranes for, photopolymd. fluorine-contg.  
     copolymer compns. as)  
 IT   Chromatography, column and liquid  
     (affinity, sepn. by, fluorine-contg. crosslinkable polymerizable  
     compns. for)  
 IT   Gels  
     (hydro-, hydrated membranes, from photopolymd. fluoropolymer  
     compns.)  
 IT   Polymerization catalysts  
     (photochem., for fluoro monomer-contg. crosslinkable compns.,  
     for xerogels)  
 IT   Polymerization catalysts  
     (radical, in prepn. of fluoropolymer crosslinkable compns. for affinity  
     chromatog.)  
 IT   Gels  
     (xero-, membranes, photopolymd. fluoropolymer compns. as)  
 IT   25038-59-9, uses and miscellaneous  
     RL: USES (Uses)  
         (film, xerogel-coated)  
 IT   103-01-5, N-Phenylglycine   67135-48-2  
     RL: USES (Uses)  
         (initiators contg., for prepн. of fluorine-contg. crosslinked compns.,  
         for xerogels)  
 IT   131231-41-9P  
     RL: PREP (Preparation)  
         (prepn. of photopolymd., for xerogel membranes)  
 IT   131212-63-0P  
     RL: PREP (Preparation)  
         (prepn. of, catalyst for)  
 IT   131212-64-1P  
     RL: PREP (Preparation)  
         (prepn. of, coatings, albumin reaction with)

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(FILE 'HOME' ENTERED AT 10:14:09 ON 05 MAY 2003)

FILE 'REGISTRY' ENTERED AT 10:14:14 ON 05 MAY 2003

|    |                         |
|----|-------------------------|
| L1 | 107 S N PHENYL GLYCINE  |
| L2 | 0 S N PHENYL GLYCINE/CN |
| L3 | 0 S N PHENYLGLYCINE/CN  |
| L4 | 107 S N PHENYL GLYCINE  |
| L5 | 1 S 103-01-5            |

FILE 'CA' ENTERED AT 10:15:33 ON 05 MAY 2003

|    |  |
|----|--|
| L6 | 6 S L5 AND (INFRARED OR INFRA ADJ RED) |
| L7 | 311 S L5 AND PHOTO?                    |
| L8 | 7 S L7 AND IR                          |
| L9 | 7 S L8 NOT L6                          |

=> log y

| COST IN U.S. DOLLARS                       | SINCE FILE ENTRY | TOTAL SESSION |
|--|------------------|---------------|
| FULL ESTIMATED COST                        | 45.51            | 81.96         |
| DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) | SINCE FILE ENTRY | TOTAL SESSION |
| CA SUBSCRIBER PRICE                        | -8.06            | -8.06         |

STN INTERNATIONAL LOGOFF AT 10:18:46 ON 05 MAY 2003